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IBERS OF

THE

GENESEE FARMER,

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A MONTHLY JOURNAL DEVOTED TO

AGRICULTURE & HORTICULTURE,

DOMESTIC AND RURAL ECONOMY.

ILLUSTRATED WITH ENGRAVINGS OF

FARM BUILDINGS, IMPLEMENTS, DOMESTIC ANIMALS,

FRUITS, FLOWERS, SHRUBS, &c.

EDITED BY

DANIEL LE[illegible] AND JAMES VICK, JR.

P. BARRY, CONDUCTOR OF THE HORTICULTURAL DEPARTMENT.

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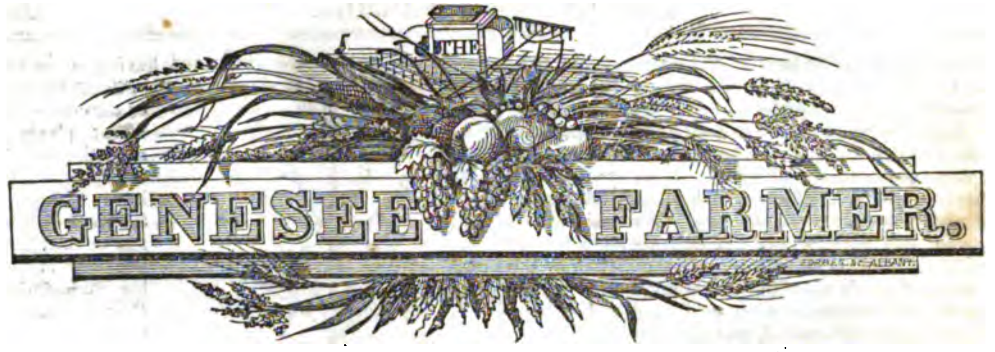


THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—JANUARY, 1851. NO. 1.

THE FARMER TO ITS FRIENDS—THE NEW YEAR.

At the commencement of a new year—a new era in our lives—it is not unprofitable to look back upon the past—to note its teachings—to call to mind its lessons of instruction. Too apt are we, in looking forward to the future, to forget the past—to neglect its warnings. It has been said that man needs to live one life to learn *how* to live. Can we not learn in one year how to live the next? Who can look back even upon the past year, without remembering many things neglected that should have been done—many things done that should not have been—still many more that might have been better done. The wasted time—the misspent moments—how large an account they roll up against us at the end of each year. A moment lost can never be recovered, but we can take heed for the future—we may learn to improve the moments as they fly. There is no fitter time than this to think of these things. There is no better time for young farmers (yea, for old as well as young,) to improve their minds, than during the long winter evenings. If we stand at the base and look up the hill of science, it indeed looks formidable. Its sides are steep and rugged—its summit almost inaccessible. But, take courage and ascend a little way, and the distance to the top is lessened—the work accomplished is less difficult than was anticipated. The path that seemed so rugged as almost to frighten us from all attempts, has become smooth—the hard road is comparatively easy. The success of the past gives courage and strength for the future. As we look abroad from the position already gained, a new world is open before us—a new creation is presented to our view. That which was once a strange language is now become familiar as household words. We now see beauty and design where before we saw no beauty—nothing to attract our attention. We now hold converse with nature, for we have learned its language. The rocks, the trees, the insects, speak to us of their age, construction, and destiny. The broken rock that once we would have passed unnoticed, is now examined; and it affords food for thought—we trace in it the leaf or the insect, and thus learn that it once belonged to the vegetable or animal world. Science teaches that this rock is crumbling and forming soil—that it contains elements that assist in forming bread and supporting life. From this position the student of nature beholds the power of the Creator as wonderfully displayed in the construction of the smallest insect, as in man. He learns, too, the matter and composition of the various plants, and what is necessary to their support.

We do not suppose that farmers can gain that eminence in science which men attain whose whole lives are devoted to study and investigation. But, we can all learn enough to understand the writings, and apply what is valuable in the discoveries of these men. We can all learn enough to enjoy the glorious "feast of reason" which a bountiful Providence has provided for us. A little determination—a little application is all that is necessary. Good books are now published very cheap, and can be obtained, we think we may safely say, by all. The *want of time*, that old excuse, is about worn out; it has acted its part—served as an excuse for the idle long enough, and all are now ashamed of it; so let it die.

In the pages of the Farmer, while we have endeavored to urge the importance of science to agriculture, we have not forgotten the necessity of heeding the teachings of experience. More than one half of our pages each month are filled with articles written by farmers who hold the plow and swing the scythe. The aversion farmers have felt to giving the results of their observation and practice on paper, is fast passing away, and now, instead of lacking such practical articles, we often have to defer some, and even then find ourselves almost crowded out. But of this we do not complain. We are willing to be crowded even into silence, if farmers will take the work into their own hands. No man, of even common observation, can labor on a farm for years, without noticing some fact in regard to crops, or weeds, or soil, or stock, of importance to those engaged in the same profession. Farmers know this, and feel the importance of the facts thus learned, as is shown by the willingness with which they communicate them to their neighbors. If farmers meet at each other's houses, or travel together to market, they discuss these questions. If you have learned anything of importance, you can talk through the farmer to a hundred thousand at once. Certainly a large and respectable audience. If any matter is stated contrary to the experience of any of our readers, a reply will soon be furnished; and thus, by bringing the minds of farmers, with their experience, in contact, we learn the facts, and are prevented from rashly jumping at conclusions.

We never commenced a volume of the Farmer under more favorable auspices, never with as much confidence in our ability to furnish a paper worthy the support of the farmers of the country. In addition to our ordinary facilities, during the coming spring we shall attend the *Great World's Fair*, and also make a tour of Great Britain and some portions of the Continent; and we hope to be able to communicate many things of value. It is our intention to make the account of our travels at once interesting and profitable to all our readers. We design to do our part, and do it WELL. It only remains for our friends to do their duty—to urge the claims of the GENESEE FARMER upon the attention of their neighbors, to make our paper what we intend it shall be—the most widely circulated, and the most useful agricultural journal in the country. To accomplish this, we shall spare neither money nor labor, and we ask the hearty co-operation of our friends. The cost is but trifling—every farmer and every farmer's son can afford to take the Farmer.

PARASITIC FUNGI OF THE FARM.

THIS class of plants has given rise to more disputes among practical farmers, than all others put together. Availing ourselves of an admirable lecture by the Rev. EDWIN SIDNEY on the "Parasitic Fungi of the British Farm," published in a late number of the Journal of the Royal Agricultural Society, with illustrations, we hope to make this subject plain to the understanding of every reader.

The word "parasitic" means something that lives at the expense of another plant or animal. Parasitic plants, however, can subsist on decaying or dead vegetables and animal substances, as toadstools grow on a dung heap, and mould in cheese.

Fungi is the plural of *fungus*, which is a *cellular* plant, *i e.*, one whose juices circulate through innumerable little cells, the sides of which are pervious to water, and not through vessels or minute tubes, as in *vascular* plants. Fungi have no flowers, live partly on air, and are farther nourished through a *stalk*, *stem* or *spawn*. Their minute seeds are called *spores* or *sporules*, which are never of a green color, and are either naked or enclosed in skinny cases, termed *sporidia*, or *spore-cases*.

Spores mostly germinate either by the protrusion of the inner membrane, or by a lengthening of the outer covering; and the *spawn* is the development of these spores, imparting to them the power of imbibing nutriment from the *matrix*, and of growing. The spawn of the common mushroom can be made to extend on glass in a way to show its development in a satisfactory manner. *Fungals* most commonly grow on animal or vegetable substances in a state of decomposition; but many of the simplest organization attack tissues which to all appearance are sound and healthy, and eventually destroy them.

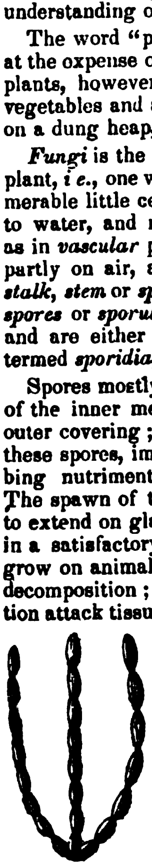


FIG. 1.

The simplest form of a *fungus* is common mouldiness, which has two types. The first, as may be seen by the aid of a good microscope, is composed of *jointed threads* made up of simple cells placed end to end, which often separate and seem capable of reproduction. This is represented in Fig. 1, where the cells may be seen as described.

In the second form, the cells are less distinctly marked, and assume a thread-like appearance, bearing spores at their extremities, and having numerous short branches, as is shown in Fig. 2. The study of the cells of different plants is exceedingly interesting. We have before us the work of MULDER on the Chemistry of Vegetable and Animal Physiology, in which this subject is discussed at length, with much acuteness and patient scientific research. At another time we may copy some of his admirable drawings, finely illustrating how plants and animals grow.

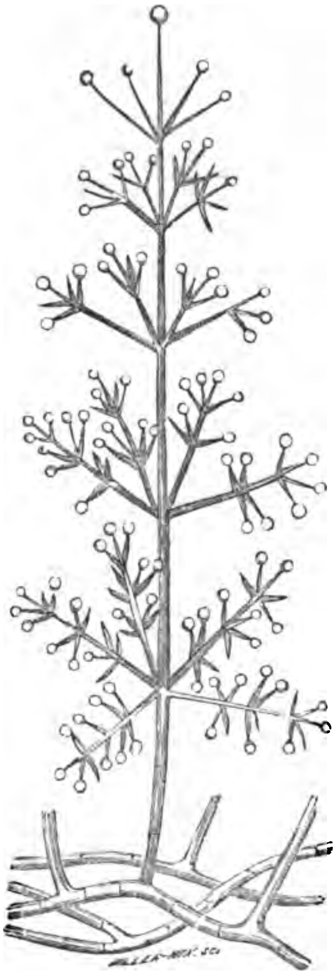


FIG. 2.

Mould on stale milk, and mildew in damp clothes, are among the simplest forms of vegetable life. In a higher state, *fungi* takes a determinate figure, formed of a mass of cellular tissue, the entire centre of which is all spores, as in the case of a common *puff-ball*. The most completely formed *fungi* have two distinct surfaces, one of which, (usually the uppermost) is smooth and without any opening; the other like the under side of a mushroom, is divided into thin plates called the *hymenium* or gills, to which the spores are attached, generally four together, as seen in Fig. 3. Upon differences of structure depend the various attempts at botanical arrangement. This class of plants is quite numerous.

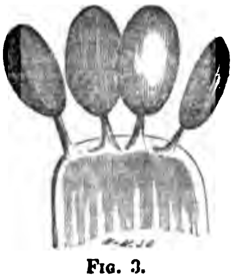


FIG. 3.

The seeds or spores of fungi are so small and incalculable in number, that it is difficult to conceive a place on the surface of the earth where they may not be present. They have been not inaptly called "the scavengers of nature." Some fungi are eatable, others poisonous; some medicinal, others intoxicating; and many are luminous, lighting up, by their phosphorus, the mines and caverns in which they grow.

The stems, leaves, and seeds of cereals are much subject to attacks from parasitic fungi, particularly *mildew*, called by botanists *puccinia*, and *rust*, called *uredo*, of which *smut* is a variety. Mildew was very destructive to the wheat crop of England in 1804, when this parasite was critically studied by Sir JOSEPH BANKS, who made microscopical drawings of the same, which are preserved in the British Museum. Since then, this class of plants has commanded considerable attention in all civilized nations.

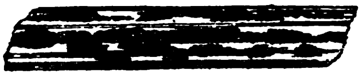


FIG. 4.

Fig. 4 represents the common appearance of mildew, the straw is a little magnified. Its appearance under a first rate modern microscope is shown in Fig. 5, where the dusty patches are crowds of club-shaped fungi (spores.)

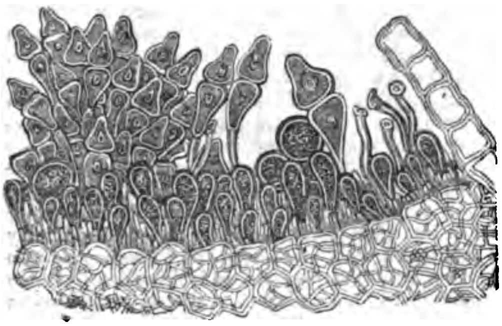


FIG. 5.

The thicker end of each is divided into two chambers that contain the reproductive *sporules*. These lift up the *epidermis*, (skin,) which is ruptured, and millions of seeds are scattered far and wide by the air and wind. Whether they pass with atmospheric air through the pores (*stomata*) in the leaves of wheat plants, or though the apertures in their roots, or both, botanists are not agreed. That the spores of fungi exist in the fluids or sap of cereal plants, has been demonstrated; but how they got there is not well settled. They often grow on the moist covering of the stems of grain and grass. There is a fungus that attacks only the joints of wheat, called *diapaza*, and still another of the mildew tribe, of a black color, which is said never to attack wheat till it is previously diseased. This, as well as *uredo rubigo*, and *uredo fetida*, (red rust and smut,) will be described and illustrated in our next.

PROPER TIME FOR FELLING TIMBER.

MR. WILLIAM PAINTER, of Concordville, Pa., in a letter written for the Patent Office Report, says: "During an experience of more than forty years as a plain practical farmer, I have taken much interest in ascertaining the best season for felling timber; and I now state, with much confidence, that fencing timber, such as all kinds of oak, chestnut, red hickory, and walnut, cut from the middle of July to the last of August, will last more than twice as long as when cut in winter, or common barking time in spring. For instance, cut a sapling, say five or six inches in diameter, for a lever, in the month of August, and another of a similar size and quality, in winter or spring, and I *know* that if the first is stripped of its bark (which at that time runs well) it will raise as a lever, at least *twice* the weight that can be raised by the latter."

Statements like the above, made by reputable men who can have no motive to misrepresent facts, are always entitled to a respectful consideration. Why should a green "sapling, six inches in diameter, cut in August," be any stronger after it is well seasoned, than it would be if cut in winter or spring?

While we doubt the fact of the difference being so great as Mr. PAINTER thinks that he has good reason to believe it to be, we do not question that there is *some* difference. The woody fibres of the tree are the same in August and in winter and spring: the new layer of wood, *alburnum*, is thin and comparatively small, and most of this is deposited before August. The proportion of sap or water in a green tree, varies but little in different seasons of the year, as compared with its dry matter. What, then, is the exact difference in timber in autumn and in spring, after a tree has put forth its leaves, and its terminal branches are rapidly extending by the deposition of new wood? When is the matter organized which flows as *sugar* dissolved in water, from the sugar-tree in the spring, before even the buds begin to swell? In what condition, and in what place does this saccharine substance spend the time from autumn till March? MULDER, in his valuable work on the "Chemistry of Vegetable and Animal Physiology," says that all sugar is first formed into starch from carbon and water; and that it is from this starch that both sugar and new wood, in spring, are produced. We are aware that other chemists have taken a different view of this subject, but we believe that MULDER is right. We know that fat in animals is a sort of storehouse of fuel which the animal can burn when its food is lacking or deficient to maintain vital warmth. Potatoes, and many other plants possess unequal quantities of starch at different periods and under different circumstances. A green sapling in the spring, has all its starch and *albumen*, or the raw material for making a vast number of leaves, much new wood, and its tissues, in which nitrogen is consumed, taken out of its trunk and distributed in thousands of branches, and in terminal buds. That the trunk should be a little weaker when thus deprived of all of its soluble solids, is no more than we might reasonably expect. To transform starch, which is insoluble, into soluble dextrine, sugar or gum, is the effect of the first warmth of spring, or winter, for in many States maple sugar is made in January and February.

If the above view of this interesting question is founded on true phisiological principles, as we believe it is, then the best time to fell a tree is after it has ceased to grow in autumn, and prepared, like a fat bear in the fall, a good supply of starch and of nitrogenous compounds, in all its sap-tissues, for use when it is ready to put forth a new covering of luxuriant foliage. There is strength in the elements of forest leaves, and these elements while deposited in the cells of sapwood, if dried therein, increase its durability. Dry rot is a fungus which destroys a great deal of ship and other timber. Whatever operates to exclude atmospheric air, tends to prevent this malady. Several minerals, like copperas, corrosive sublimate and blue vitriol, will kill the fungus called "dry-rot." Exclude oxygen from wood and it cannot decay. Painting preserves it on this principle.

A HAND, in measuring height of horses, is four inches.

A NATIONAL POISON.

UNDER this heading, the editor of the "Horticulturist" writes a leader of five and a half pages in length, which appears in the November number of that journal. After an extended and grandiloquent introduction, the case is thus stated :

> The national poison that we allude to, is nothing less than the vitiated air of *close stoves*, and the unventilated apartments which accompany them. "Stoves," exclaim a thousand voices in the same breath. "stoves poisonous? Non sense! They are perfectly healthy, as well as the most economical, convenient, labor-saving. useful and most indispensible things in the world." We grant it all, good friends and readers, but must also have our opinion—our calmly considered, and carefully matured opinion—which is nothing more nor less than this, that stoves, as now used, are a national curse—the secret poisoners of that blessed air bestowed by a kind Providence, as an elixer of life, giving us new vigor and fresh energy at every inspiration, and we ungrateful beings, as if the pure breath of heaven were not fit for us, we reject it, and breathe instead—what? —the air which passes over the surface of hot iron and becomes loaded with all the vapor of arsenic and sulphur, which that metal, highly heated. constantly gives off!

From the above, the reader will see that the editor of the "Horticulturist" disagrees with Hudibras, who taught—

> "What dreadful perils do environ
> The man that meddles with *cold* iron."

It is "*hot* iron" that "constantly gives off vapors of arsenic and sulphur."

Suppose a stove were made exclusively of arsenic and sulphur, or of any other combustible substance ; how long would the stove stand heating before, like a wooden one, it would all be dissipated in gas and vapor? Probably not one part in ten thousand of the metal in a stove is arsenic or sulphur ; and if this minute quantity is "*constantly given off*" when heated, it is obvious that a few hours will suffice to consume the whole of these really combustible minerals. If they are in a condition, by their intimate association with iron, to be involatile, then it is equally plain that no poisonous vapors can be "given off." It would be as reasonable to say that, an ounce of coal can be forever burning in a stove and "constantly giving off vapor" and carbonic acid, and yet never be consumed!

If stoves were not in general use, and whatever affects the public health were not of universal interest, we should not have deemed it worth while to expose the grave error of this "calmly considered and carefully matured opinion," so confidently expressed.

The article contains several other "opinions" put forth with equally "calm consideration," which deserve correction. If the following be true, then our humble opinion is greatly at fault : "It is safe to say that nine-tenths of all the houses in the northern States, whether belonging to rich or poor, are entirely unventilated, and heated at the present moment by close stoves."

We know not what Mr. DOWNING regards as an "UNVENTILATED HOUSE ;" but we have traveled a good deal in the northern States, from Massachusetts to Iowa, and if nine-tenths of the dwellings of country people are not sufficiently ventilated, then they must live in tents, for we have slept in many a house where one need not get out of his bed to count the stars, without the aid of a window. It is possible to make a room too tight for the health of its occupants ; but that nine-tenths of all the houses in the northern or southern States are so constructed, is a great mistake. We write this paper in a building that cost over $460,000, which has thick walls, floors that rest on solid arches, and no room has other means of ventilation than common doors and windows. Each room is substantially a large stone oven, and yet so strong is the current of air that rushes in at the sides, top and bottom of every door, that the noise sounds like stage thunder. Not to be misunderstood, we repeat that rooms may be too close for health, and particularly small sleeping rooms, when neither door nor window is opened from nine at night till six in the morning. Proper ventilation is all-important ; but one need not live out door, as some do in the main, to secure this advantage.

The editor of the "Horticulturist" speaks of close stoves as "little demons," apparently on the principle "give a dog a bad name, then kill him." Why is a "close stove" more injurious to the air of a room than an open one? Let us assume that the room is reasonably tight, *i. e.*, there is an average number of apertures around doors, windows, through cracks in plastered walls, and at the ends and sides of floors, both below and above, for ventilation.

The question is, which kind of stove, an open Franklin, or a close one, will consume the more oxygen in any given length of time? Clearly, the stove that burns the most wood will, in all cases, consume the most vital air, in its combustion. If no fuel is burned, then no oxygen is consumed in converting carbon into carbonic acid—that is plain. But it may be said that a close stove sends its carbonic acid into the room, while the open one sends this deleterious gas up chimney. This is the pith of all that is said against these "little demons." When coals are burnt in an iron kettle or furnace, in a close room, as has been frequently done, then all the poisonous gases are discharged into the atmosphere of the apartment, and a few have lost their lives by their ignorance. But anything worthy of the name of "stove," no matter how close it is, conducts the products of combustion out of the room ; and nothing is plainer than the fact, that the less fuel it consumes, the less vital air is transformed into carbonic acid and lost. Heated iron consumes oxygen no farther than it is burnt, or oxidized, which in an iron stove is next to nothing, in the course of twenty-four hours. A room warmed entirely by hot iron, without any combustion, would be perfectly healthy, provided there was one aperture of reasonable size for the admission of fresh pure air. The impure air can and will pass out at the same opening. The idea that a room can only be ventilated, properly, by an open fire place of brick or iron on one side of it, and a door open on the other, with a strong current of air passing up the chimney, is a mistake. Any place large enough for air to pass into a room, is large enough for it to go out again. In case the walls, floors, windows, and doors of a room are very tight, some opening, made expressly for ventilation, should be provided. This is done by valves, and apertures through floors, bottom and top, through doors or windows, or from the room into the chimney. In case a dwelling is two or three stories, and warm rooms are needed on each floor, there is considerable economy in using a furnace in the basement, and warming every room by pure, and duly moistened, heated air. There is need of improvement in the every day business of keeping rooms neither too cold nor too hot, and the air never too dry nor impure. Thousands take cold and get sick, by sitting or sleeping in currents of cold, and often damp, air. All extremes in shutting out air, and letting it in, are to be avoided. Mrs. **Hamilton**, relict of **Alexander Hamilton**, and daughter of Gen. **Schuyler**, now in her ninety-sixth year, enjoys good health by avoiding the extremes to which we have alluded.

All that Mr. **Downing** has so well said in favor of ladies and gentlemen, or persons of both sexes, taking exercise regularly in the open air, by riding, walking, or working, we fully endorse. Hot-house plants, and pale, enervated children, men and women, may do for a poor show, but nature owns them not. We are deteriorating our race by the intensity of our laziness, artificial stimulants, and ridiculous contrivances for doing nothing. We hold that it is the duty of all, not only to take daily exercise, but to perform *useful labor.* No intelligent and healthy person can be regarded as innocent, that has an opportunity to work, and fails to produce an equivalent for all that he or she consumes. If one family may rightfully live without any sweat of the face, all may, by the same rule. Idleness is a wrong done to the whole community, and to several generations; and the greater the number of idle persons, the greater the injury. We deliberately manufacture three-fourths of the diseases and paupers that exist in society. and profess to believe that it is all right, wise and proper. We rejoice that the U. S. census of 1850 has signalized the middle of the 19th century, by making a record of all births and deaths throughout the whole Union, in the twelve months preceding the [illegible] of June or July. The study of the causes of mortality, in their connection with the occupations of men, modes of living, construction of dwellings, proximity to marshes and other stagnant waters, over thirty-one States, presents many points of deep interest. Science, taking a loftier position, will undertake to *prevent,* rather than *cure,* most of our afflictions.

PROFESSOR JOHNSTON'S VIEW OF AMERICAN AGRICULTURE.

At a meeting of the [illegible] of Berwickshire Farmer's Club, Professor **Johnston**, recently returned from America, delivered the following address, which we copy from the London Farmer's Magazine:

I will briefly refer to some points which came under my observation in that part of the country which I visited. First of all, as to the state of agriculture in the northern parts of America, in our provinces, and in New England, with which we are ourselves more familiar, when I tell you generally that the state of agriculture in those parts of America is what the state of agriculture in Scotland probably was eighty or ninety years ago—and when I tell you that in some parts of New Brunswick they are very nearly in the precise condition in which Scotland was one hundred and twenty years ago, you will have an idea of the state of agriculture in North America. The system of agriculture is no farther forward—it is exceedingly far behind. They are not even acquainted with the improved methods of farming, or the improved implements which are now in common use in this country; while the increased facilities which Mr. **Milne** would still farther introduce, have never been heard of by them. Now, in regard to this state of things in the whole of the northern part of America, go as far west as you like, and as far south as you like, the same general description applies to the whole. Now, the next question is, how has this state of things been brought about? You are probably not so well acquainted with the state of agriculture in this country 100 or 120 years ago as I have found it my duty to make myself; and at the time to which I refer, I allude not only to the state of great ignorance in regard to the cultivation of the soil, but to the state of exhaustion in the soil itself. So in referring to the present state of agriculture in America, I refer to two considerations—the condition of mind brought to bear upon the cultivation of the land, and the state of the land itself. In regard to the cultivation of land in America, its condition arises from a variety of causes, and a very few considerations will enable you to understand how it has come about. If you ask yourselves to what class does the majority of emigrants belong, you will have no difficulty in coming to a conclusion. Look at the great crowds of people who go from Ireland, from the Highlands of Scotland, and the hundreds of thousands proceeding from the great towns of England and Scotland—ask yourselves of what class they consist—what amount of intelligence and agricultural knowledge they possess; in the answer to this you will at once find the key to the state of the land in the whole northern part of America. The people who first settled in America knew nothing of agriculture, and their descendents have generally copied the habits of their predecessors. Thus it came that their sons knew nothing—out of the way of books, out of the way of instruction, supposing them even to have read books, they would have made very little progress; but we must suppose them not to have had an opportunity of gaining knowledge, and therefore instead of advancing, *they have retrograded in agricultural knowledge and practice.* Now, what has been their procedure—by what kind of procedure have they brought about the state of exhaustion to which the soil has been reduced? Of course, in speaking of the exhausted soil, I do not refer to the virgin soil which has never received the plow or the spade; but to the soil under their cultivation, and which they are now exhausting. When I tell you how the land is cultivated, you will understand how this exhaustion has been produced. The forest is in the first place cut down and burnt, after which the ashes are scattered, and a crop of wheat and oats is sown. When this crop is cut down, another is sown; but they do not always remove the straw—they do not trouble themselves with any manure. The second year they sow it again and harrow it, and generally take three crops in succession. When they can take no more out of it, they either sow grass seeds, or as frequently leave it to seed itself. They will then sometimes cut hay twelve, fourteen, sixteen, eighteen, or twenty years in succession—in fact as long as they can even get half a ton an acre from it. And you may suppose what is the natural fertility of the land, when they are able to obtain as much as three or four tons per acre at first, and go on cutting it for twelve years. They will probably have two tons an acre during all that length of time. The land is then broken up and a crop of oats taken, then potatoes, then a crop of wheat, and then hay for twelve years again; and so the same course is repeated. Now this is the way in which the land is treated—this is the way in which the exhaustion is brought about. This exhaustion exists in Nova Scotia, New Brunswick, Lower Canada, in Upper Canada to a considerable extent, over the whole of New England, and extends even into the state of New York. The next inquiry which you will make is, what steps are they taking to remedy this state of things? Are they doing anything to bring back the land to a productive condition? and in order to do this are they taking steps to *put any knowledge into the heads of those who cultivate it?*

Now, on those points I am happy to say that I can speak very favorably. They possess the spirit of their forefathers, and having become conscious of the state in which agriculture really is, they are endeavoring to improve it. But you will ask what inducement have they to make these exertions? They grow corn enough,—they have no want of agricultural produce as we have; but when I tell you what is the condi- of the New England states you will understand. All the new states—all the virgin land when it is cultivated yields a crop for little or nothing, but it can not by any means yield a large crop. In the State of Michigan, between Lakes Superior and Erie, the average produce is not twelve bushels an acre, but it is got for nothing. In New Brunswick, which is very thinly populated, I was told that ten bushels an acre paid well! but the produce is not large. In the western states they are able to produce it very cheaply.

Mr. **Hay**—What is the value of a bushel of wheat?

Professor **Johnston**—At the time I was there the price varied from 61 to 80 cents a bushel, *i. e.* 100 cents being 4*s.* 6*d.* In the western states and part of New York, where it is shipped to England, the price varies according to the distance. Now, the condition of things in the western states in reference to England, is precisely the same as the condition of England in reference to the wheat-producing countries of the Baltic. The condition of the farmers is exceedingly bad; in Maine I was informed that they were *all* in a state of bankruptcy. The land is *all* mortgaged, which hangs like a millstone round their necks, and is worse even than the state of the farmers in this country. They are thus unable to compete with the western parts of New York or Lake Ontario. You have all heard of the famous wheat of Genesee, where the land is more fertile than in any part of Great Britain; and I learned that they are laying the land down to grass, because they can not afford to grow wheat. As a remedy for this state of things, they are establishing agricultural societies in the different states, and the legislature is providing funds to support these societies, and for the diffusion of knowledge. The central society is in Albany, and to it the different branches send reports. The Legislature publishes these in one thick volume, and circulates 20,000 copies gratuitously *throughout the states*. This central society asked me to give their annual address at Syracuse, and a course of lectures before the *Legislature* at Albany. These lectures are to form a part of this year's report; and the Legislature has resolved to print an additional 20,000 copies, making 40,000 altogether, and to circulate them *gratuitously through the several states*.

Let us now come to another point of great importance, and to which you would perhaps like me to advert, namely, agriculture in America. What influence will the growth of wheat in the states have upon us, or what influence is the progress agriculture consequent on this great desire for improvement, likely to have upon the state of agriculture in Great Britain? In New Brunswick, New England, and New York, the growth of wheat has almost ceased; and it is gradually receding further and further westward. Now, when I tell you this, you will see that what I believe to be the case, is really the case—that it will not be very long before America will be unable—in fact the United States are unable now—to supply us with wheat in any large quantity. If we could bring Indian corn into general use, we might get plenty of it; but I do not think that the United States need be any bugbear to you. I believe the great source of competition you will have to contend with is the Baltic and the countries on the borders of the Black Sea. Now, in regard to the other point, namely. what effect will the desire for improvement in agriculture have upon the agriculture of this country, it ought to stimulate us to so still greater exertions. Sure I am, that with proper exertions *we will always keep ahead of them.* There is as good blood in this country as ever went out of it. I hope English and Scotch heads and hearts will not become languid and dull on a matter of such moment as this, but that we will continue to beat them, as I am sure from what I have seen, that we are able. What the Americans are able to do well, we ought to do better. (The learned Professor sat down amid great applause.)

This address furnishes food for much serious reflection; and if it do not prompt our friends to make greater efforts for the advancement of American agriculture, we shall be both disappointed and mortified. In our next we shall review it at length. We have put the price of this journal at a mere nominal sum, that all may read it.

STATE AND PROSPECTS OF AGRICULTURE IN CALIFORNIA.

Much as has been written of California, yet but little is at present known of her agricultural character and capabilities. This matter has in a great measure been lost sight of, and yet it is a question of the highest importance to the welfare of this new State. Her surface may be covered with gold, and yet she can never become an independent and flourishing, or even a wealthy State, unless her soil is adapted to agricultural purposes. Without this, California will be but a poor dependent upon the older States—her population unsettled—enriching others at her own expense. It is with much pleasure we are enabled to give the following letter from an old friend, and we have no doubt it will be read with interest.

California—Its Agricultural Prospects—Its Soils—The Gold Region—Its Supposed Width.

It requires no ordinary amount of courage, I was going to say effrontery, to undertake to write and pronounce opinions on a question so unsettled as the agricultural capabilities of California. Those who have heretofore given forth their dicta to the world, either in official reports or in books for sale, have too often had the mortification of finding themselves held up to ridicule, in California, for the gross errors with which their statements abound. The chief cause of the errors that have been honestly committed, have arisen from the want of correct data on which to form correct conclusions. The population of northern California are immigrants "but of yesterday," and know very little of the strange country in which they find themselves—a country in which the seasons vary so much as almost to persuade one to adopt the theory of the natives—that the Yankees are a wonderful people, they have brought a new climate with them to California.

Last spring, a year ago, "the oldest inhabitant" pitched his tent in this city, began clearing away the under-growth. To-day we have the certain experience of one year and a half. The two seasons differ from each other so widely as to pass for different climates. Had you asked this "oldest inhabitant" about the truth of the stories afloat, that Sacramento valley was subject to inundation, he would have told you that it was contrary to his experience; he would have told you that he passed the winter previous at the Fork, and this land was above the highest flood; and had you made all the inquiries that I did, you would doubtless have done as I did—go to bed, after looking at the rising waters. You would not believe, on the evidence before you, that in a single night the waters of a single river could flood so broad a valley to the heighth of your bedstead. But, contrary to the experience of "the oldest inhabitant," the floods came, and in one night the whole valley of the Sacramento, with the exception of a few isolated spots, was one continuous sheet of water. Had you asked this "oldest inhabitant" about the climate, he would have told you that the average temperature was over 100° during the summer last past, and he presumed it would be so this—sometimes running up as high as 128° in the shade. He would have told you that there were no rains from March to November, except a slight shower in June and another shower about the middle of October—and that it was a very sickly town. Had you compared his statements with your own experience for the present year, you would have found them totally incorrect. You would have found the heat never rising above 109° in the shade. You would have found the deaths less, in proportion to the number of inhabitants, than at home. You would have experienced no shower in June, but a heavy and continuous rain, like the commencement of the rainy season in September.

In May, you would have said there could be no agriculture, for the flood of that month would drown out all the seeds that should have been in the ground a month or more, and yet in August, you might have said that you had never eaten tomatoes so rich as those grown in this valley. In no country in the world has corn, potatoes, onions, beets, turnips, radishes, valparis (Valparaiso) squashes, reached a higher perfection, or exhibited a more luxurious growth, than in this valley, so far as one can judge from the specimens brought to market. And the wild grapes, too; no country can boast of more luxurious growth, or a more nutritious food for cattle, than the wild grape of California. The yield of wheat is most prolific.

The upshot of my own observations (and you must bear in mind that they are the observation of only a single year,) are, that those spots and portions of California susceptible of cultivation, grow all the above named agricultural productions to a higher state of perfection than I have ever before seen them. But how large a portion of California is susceptible of cultivation, can only be determined by the experience of several years. The system of cultivation, too, must be determined by a long series of experiments. The heavy plows used in our clay lands are not wanted in California. Light plows, something after the fashion of the gang plow, is all that is required to scratch over the surface of the ground to prepare it for holding the seed. The loose character of the earth for several feet deep, allows the roots to penetrate to an unusual depth, on their own motion, while the peculiar nature of the soil and the climate causes the deep plowed earth to dry up and become unproductive. In planting or sowing, regard must be had to spreading out vegetation, so as to cover the whole surface of the ground with a shade, otherwise the sun will parch it up and your crop will be spoiled.

You will see by these brief hints, that the system of cultivation to be pursued in California, must be entirely different from our previously conceived notions. And then, too, the chemical combinations of the soils are so extraordinary as to suggest the propriety of placing agricultural chemistry at the head of the sciences to be taught in California.

At the risk of being tedious, I will add something of the general features of the country. The valley lands, from the few observations made, would seem to be underlaid with a bed-rock, not many feet below the surface, but yet varying considerable at different points. This rock is overlaid with a "hard pan," so compact as to hold the water of the early rains in the superincumbent soil. From the hard-pan, upwards to the surface, the earth is of so loose a character, that I cannot better describe it than by comparing it with leached ashes. The first heavy rains that fall make the roads impassable for teams; and as the water rises in the rivers, you find that the water rises to the same level, and at the same time, in the wells and sloughs, and when the waters have nearly reached the surface, there is a difficulty which the pack mules have to encounter in crossing the valleys, called *slumping*. This earth contains an unusual amount of alkali; in solution, and would suggest the propriety of using lime as a manure. After the waters have abated, the sowing and planting season begins and you get in the seed with as little disturbance of the earth as possible, and as the dry season comes on, they take root downwards—and the roots do go down with a vengeance. In witnessing the digging of a ditch on the *Rancho del Paso*, (the shepherd's farm,) I was astonished at the depth to which the grass roots penetrated this loose earth, and I thought then, and think still, that the peculiar character of the grasses of California, to some extent, was owing to this fact. These disjointed remarks may not be universally true, but they may serve as a general outline of the valleys of Sacramento, Napa and San Hosa, (San Jose) so far as I have had opportunities to examine. But when you leave the valley of Sacramento, which varies from ten to fifty miles in width, you enter a rolling land covered, like the plains, with straggling oaks, which appears to be a sort of neutral ground.

But after crossing this, you enter the gold bearing region —a region as distinctly marked, and as different in its general characteristics from the country you have just left, as "chalk is from cheese." The country, everywhere, begins to assume a barren look, the dwarf mountain pines here first make their appearance, and in those portions of this gold bearing region the strata of rock protrudes from the earth in a shattered condition, and when they are of a secondary formation, the strata stands perpendicular to the earth, and with a surprising uniformity extend north and south. But the whole of the rocky formations, whether primitive or secondary, as far as my superficial observation goes, bear strong marks of some convulsion of nature, which has shivered them into fragments. The great discovery of this year is one that has been made at a sore cost to the miners, viz.: that this region of gold has a clearly defined limit towards the mountain, as well as towards the plain. That there is a point upon the side of the mountains, beyond which gold is not found in considerable quantities, upon the streams at least, is now admitted generally; but the theories about it differ, and none are without exceptions. The more common is, that the gold-bearing region passes under the mountains and comes out again to the surface on the opposite side, where diggings of the same character as in this valley are found, as at Carson. Another, that the gold being washed down fron the higher regions of the mountains, embedded in large masses of earth, which masses of earth are, by the violence of the waters of the mountain torrents, broken into fragments, and the gold, from its great specific gravity, precipitated, in its voyage down the stream on its frail earthen supports. A third is, that the gold lies in strata, or leads, and like the rocks, crosses the water courses, and while the earth around and over it is washed away, the great specific gravity of the gold makes it almost insensible to the action of the water. It is cited in support of this theory, that where rich deposits are found in the streams, oftentimes leads are found on either bank penetrating far beyond the reach of the alluvial deposit. And the Kiota (Coyote) diggings are also cited, where a shaft is sunk 60 or 100 feet into the solid earth, where there are no appearances of gold or of washings, and after the bed rock is struck, kiotas (the coyote is a prairie dog or fox,) are extended along the rock in every direction until a lead is struck, which is followed up as far as the lead is profitable. This is one way of coyotying; another is, following a lead from the surface.

But without stopping to discuss the relative merits of these theories, or whether there is not some truth in the theory that combines them all, we had better turn back to the subject of Agriculture, on which we at first set out. The first difficulty in the way of the successful prosecution of agriculture, is the difficulties attending the possession of lands. Before the conquest, the lands, being of little value, were possessed in large estates, with ill-defined boundaries, and no great regard was had to the perfecting of the title papers. The rewards of agriculture are so great, that men do not hesitate to lay out "preemptions" whenever the location pleases them, but as their right to the soil is very doubtful, their system of cultivation is of the most superficial kind. There is a continued war between the herdsmen (*Bucaros*) of the estate, and the squatters. The squatters are backed by the sympathies of the miners, who are at free quarters on government land, while the old land titles are supported by the holders of town lots. Of the parties engaged in the fight in our streets, one half, I should judge from their appearance, were volunteers from the country. All these things have a tendency to postpone any permanent agricultural improvements; nor is it probable that a settled and orderly state of society, so essential to the high development of the agricultural resources of the country, will for a long time be attained.

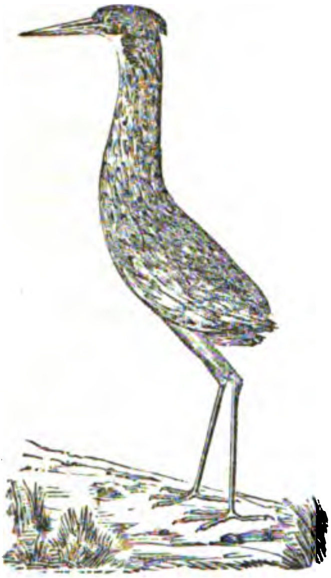
These are some of the "lets and hindrances." but, on the other hand, the price *by the pound* for everything which the country can produce, and the indomitable disposition of its new proprietors, will soon overcome these and a thousand other obstacles, and I doubt not, if Providence shall spare my life another year, I shall be able to send you a more detailed, and a more flattering account of the agriculture of California, and furnish some accurate statistics in relation to the much agitated question of the extent to which California is susceptible of cultivation. W.—*Sacramento City, Cal., Oct.*, 1850.

FARMERS, SAVE THE WASH OF THE BARNYARD.

EDS. GEN. FARMER:—Of all the waste of food for plants, permitted by the farmer, (as far as my experience extends,) this is the greatest. If I was to hazard a conjecture, I should say that one-half of the strength of manure is leeched out and washed away by rain. I may be a little too high in this estimate. I hope so. I will now propose three plans, by adopting either of which, (which I hope many farmers will do,) this waste may be prevented. The first plan is to make a roof large enough to contain all the manure made in the year, and put it under cover as it comes out of the stable. But as this would be expensive, it would not suit all. The second plan is the one recommended by me in the Genesee Farmer, (see "How to kill Elders and improve the Farm,") Vol. 11, No. 11, page 253. This reservoir is easily made by first plowing and pulverizing the surface, where the wash runs out of the barnyard, and hauling it out for manure. It will pay well for the labor. My third plan, "PLOUGHER" (in "The experience of a Young Farmer,") has partly hit, when he hauls his manure out as soon as it is made and plows it in; but this should not be done until the straw is thoroughly incorporated with excremental juices. But he is wide of the mark, when he comes to plowing in dry straw. Green buckwheat, which he condemns so much, is better. I can give my young friend, "PLOUGHER," my experience on this, for fifty years back, from observation, and forty years, from practical farming. One of my neighbors, a clever, nice old man, fifty years ago owned a large farm of as good natural soil, perhaps, as there is in the rich old county of Bucks, Pa., but in some things he was rather over nice, as the sequel has shown. His barn stood on a nice green bank, and you would seldom see straw about it, for the old man considered straw an annoyance; therefore, he hauled it out as it was threshed, and plowed it in. This man had a family of stout sons, who all left him when they grew up; some of them hired themselves to farmers, because the old homestead had become so poor that it would not pay the expense of tillage. I have learned, by practical farming, that plowing in dry straw or dry cornstalks is of very little benefit. GREEN FARMER.

THE HEN FEVER

It is surprising to witness the workings of this fashionable, we had nearly written *foolish*, fever. The yellow fever and cholera may be more fatal; the "grippe," or broken-bone fever, harder to bear, but the "hen fever" is making. the most fools, and engulfing the most money, particularly in New England; and we judge from numerous letters lately received from our friends at the south, that they are getting a touch of it even there. Our orders for Shanghaes, Chittagongs, Cochin-Chinas, Plymouth Rocks, and half a dozen other puffed-up, worthless breeds of fowls. whose strong points of recommendation consist solely of long legs and necks, big heads, bodies meagerly covered with coarse flesh, and as destitute of beauty as the specimen denoted by the cut below. are numerous, but these will all remain unanswered. for we have no idea of being mixed up with the miserable humbug in the hen trade, which is kept alive by a class of papers that might be better employed. The public look to the agricultural press for truth, instead of deception and twaddle.



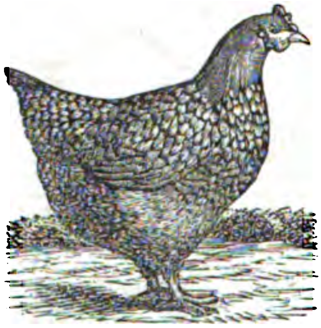
Breeders who live upon the gullibility of the public, keep this fever alive by means of publications, in such papers as will lend themselves to the *henhussys*, and by poultry books. got up on purpose to assist them to sell their great overgrown, long-legged, crane-necked, big-headed abortions, not one of which is worth half as much to the farmer, as the old stock of Javas, Malays, or their crosses, the Bucks-county and Jersey Blues, which can be bought at a moderate price. We understand, that from $20 to $100 a pair is the asking price of these great poultry breeders, who know no more of the true merits of a fowl, than they do about the henroost of the emperor of China, or the duck pond of the Great Mogul.

We are sorry to see respectable agricultural papers, like some we might name in Boston, engaged in such small business as puffing these miserable bipeds (feathered or featherless) into notice. We can assure them that their columns could be much better occupied than in such humbugging and *foul* foolery. They may be-praise or be-foul such as they please; but after all is said and done, the best and most profitable for the farmer to keep, is the Dorking, or a good common kind. like the old-fashioned speckled Dominique. the latter of which can be bought for fifty cents to one dollar per pair. Such fowls can pick up their own living in the farmyard; they want neither corseting nor stuffing. they can take care of themselves.—*American Agriculturist.*

There is, perhaps a good deal of "*humbug*" in the hen excitement that has raged so severly in the neighborhood of Boston, and we are sorely mistaken if there is not a little of the same article in the above from the Agriculturist. We know of no greater humbug than for a paper to announce itself as the *peculiar and especial enemy of humbugs*, as some we know of are very fond of doing. We have seen the Shanghaes and Cochin-Chinas, many times, and we really think they bear no more resemblance to the engraving, than the Malays, which are so favorably mentioned. It certainly seems unreasonable to give fifteen or twenty dollars for a pair of fowls; but if any of these breeds are really valuable, this is but a small objection.—They propagate so fast, that this price can be maintained but a short time. But even if a person gave twenty dollars for a pair, we suppose in a year he might repay himself, even if he sold the chickens at a dollar each; or make money the second year, by selling at fifty cents. But if this is an objection to the Cochin-Chinas and Shanghaes, it is equally an objection against the Dorkings. We know of Shanghaes sold here for $5 a pair, and we have known $5 offered in vain for a Dorking cock.

The *coarseness of the flesh* is raised as an objection. On this point we are not prepared to speak, never having killed a ten or twenty dollar fowl, to test the quality of its flesh. Perhaps the editor of the Agriculturist can afford to feast on such expensive luxuries.

We had no desire to be cheated, and certainly were not troubled with the "*hen fever*;" yet we were not willing either to condemn or recommend any variety untried, so we procured the *Shanghaes* and *Cochin-Chinas*, these being the kinds with which the fever appeared to have originated. We have tested them in various ways, and we are not yet prepared to meet out such wholesale condemnation as that contained in the article quoted. Indeed, we think the Shanghaes are superior in some respects to any fowls we have ever kept, and we have had the Malays, Polands, and Dorkings. For hardiness, (and this is a great point,) we think they are not equalled. We have never lost a chick, from any disease, though we have been singularly unfortunate in raising chickens this season. In two cases where one Shanghae chicken was hatched with eight or nine Polands and Dorkings, the Shanghae was the only one we succeeded in raising. On cold mornings, while other fowls appear affected by the cold, and show an unwillingness to leave the house, the Shanghaes are running about apparently unconcerned about the weather, scratching away the snow to get at the ground.



The annexed engraving is a portrait of a Shanghae hen we have, and the artist has succeeded in making it so correct that several who saw it, and who had seen the hen, readily recognized it. Now we ask, what resemblance is there between this fowl and the long-legged caricature in the Agriculturist's article. Is it not the greatest of "*humbugs*" to represent this breed of fowls by such a picture? What sense is there in calling such fowls "overgrown, long-legged, crane-necked, big-headed abortions?"

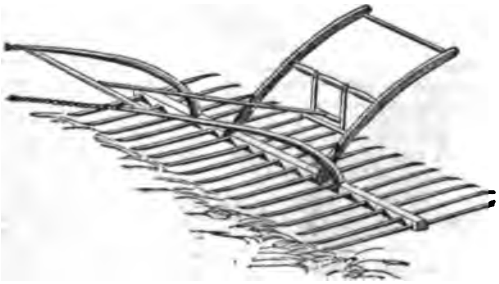
If it is right and proper to give ten times the worth of common cattle for a breed supposed to be superior, where is the folly in giving ten times the price of common fowls for an improved kind? Some men that strain at a $10 "rooster," can swallow a $500 "Durham bull." We have no fowls to sell; but if, after another year's trial, the Shanghaes prove as good as we have some reason to think they will, we shall be able to supply our friends with these fowls as cheap as they wish. We have tried various experiments as to the amount of food consumed by the various kinds, and after further trial may state the results.

Inquiries and Answers.

HORSE RAKES.

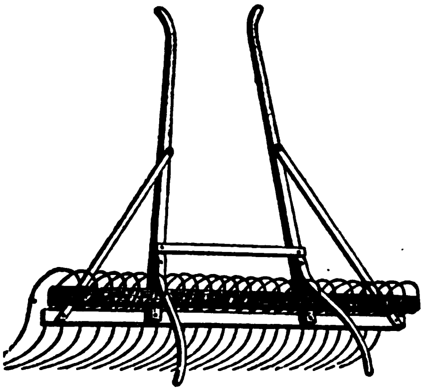
Messrs. Editors :—Permit a subscriber to ask you, or some one else, through your paper, for the best plan for a Hay Rake. We have some two kinds of Horse Rakes in this country; one is a revolving rake, a patent concern, that will not work at all; the other is a straight piece of timber with teeth in one side, and has handles, and is operated by fastening a rope or chain to each end and hitching the horse to the chain in the centre, then go ahead till it gets full, then stop the horse, pull the rake from under the hay, lift over and go on again. Now this species of rake is intolerable, though there is a number of them used here. The revolving rake, either owing to the construction of it, or some other cause, will not operate at all. The Right was sold to a wagon maker in this county, and he manufactured one only, and that will not operate. You will confer a favor on one of your subscribers, at least, by giving some directions about constructing a good hay rake. There are numbers of your subscribers here that will be grateful to you for such information. Agriculture on any systematic plan is scarcely known in this township, you may judge from the fact that there is but one agricultural paper taken here. A **Western Clodhopper**.—*Washington Co., Ia.*, 1850.

The horse-rake, so well and so favorably known in many parts of the country, "holds nearly the same relation to the common hand-rake, in saving labor, as the plow and cultivator bear to the spade and hoe." The amount of work it will perform with a single horse and driver, may be easily estimated by any one, when it is stated that a strip of hay on the ground, ten feet wide, may be raked up into winrows as fast as the horse can walk; that is, if the horse travels three miles an hour, more than three acres will be raked up in that time, or at the rate of twenty-four acres per day. The only labor in unloading each rakeful of hay, is a slight lifting of the handles, which causes the teeth and handles to make a semi-revolution, and drop the hay without the least stopping or delay. The rapidity with which a large field of hay may be secured from a threatning storm is one of its greatest advantages.



The engraving is a representation of *Wilcox's Premium Revolving Horse-Rake*. There are several others in use, but all constructed somewhat upon the same principle. Price, from $7,50 to $8,50.

A good horse-rake is also now in use, called the *Spring-Tooth Horse-Rake*. It is light, and may be carried by one man all about the farm. The elasticity of the teeth prevents their breaking or fastening to any obstruction with which they may chance to come in contact. They operate very well on rough or stony ground, and are first rate for raking wheat stubble, and thus gleaning what would otherwise be wasted. From one to two bushels to the acre is often secured in this way, and one man with this rake can glean twenty acres a day. The construction of this rake may be seen by the next engraving.



The rake, as usually made, has a head about nine feet long, and from twenty to twenty-four elastic wire teeth. It does not revolve, but is raised over the winrow with ease and facility, without stopping the horse; the whole rake weighing only about sixty pounds, and the thills being upheld by the horse, the holder has only to lift one end of the rake by the handles, and the advance motion of the horse will have carried it over the winrow while the holder can lift it up and down properly. The holder bears down on the handles more or less, according to the size of the winrow he wishes to collect, and leaves the winrow when and where he pleases, by quickly raising the handles, as before stated. Price, $8.

CULTIVATION OF THE CRANBERRY.

Messrs. Editors :—Some of the members of my family have recently become interested in the cultivation of the Cranberry, and, as a consequence, are looking for light on the subject. Can you give any information as to the *modus operandi?* E. **Guyer**.

We know but little about the cultivation of the cranberry. Massachusetts is the only State that we know of where the cranberry is cultivated, and the statements we have seen of the manner and success, are very contradictory. The best we can find on the subject is in *Cole's Fruit Book*, from which we make the following extracts:

"**Culture on Wet Lands**.—Nearly all the cranberries of spontaneous production are found on low, wet lands, that are flooded a part of the season. Many and various experiments have been made to improve the natural cranberry meadows. The most successful management is by applying sand as a dressing, and that from the sea-shore is best. And it may be inferred that salt is useful, from the cranberry growing on salt marshes, which we have noticed in several instances in Maine. One writer on this subject says that the cranberry grows well in sand and water. Prepare a bog meadow for cranberries by plowing, if convenient, and applying about two inches of sand to the surface, and set the vines in small sods, in rows two feet apart, and twelve or fifteen inches in the rows, and they will soon spread over the land, and yield a full crop.

"Cranberries on wet lands are greatly improved by flooding; and sometimes the flooding is continued till late in spring, say the first of May or later, in order to retard blossoming, lest the blossoms should be killed by frost. As frosts are very destructive, some have meadows so planned that they can be flooded when a cold night is at hand.

"CULTURE ON HIGH LAND.—Much may doubtless be done to advantage on high land. We have seen the cranberry starting spontaneously on very hard, tolerably moist grass upland, and spreading rapidly, yielding good fruit. We saw fine cranberries of natural growth in a field, close by which the owner was reaping a good crop of barley. We examined the soil, and it was dry and sandy, with a layer of shallow vegetable mold at the surface: yet apparently wet in spring, from its level situation. Where a gravelly knoll had been reduced, for a road, we saw excellent cranberries, of spontaneous production, on dry, hard, and poor soil. On another spot, we saw fine fruit by the roadside, on a very poor, dry, hard soil.

"With these cases of good crops under every disadvantage, it would be surprising if cranberries should not grow well on high land, under good culture.—FOWLER thinks they will not endure the heat of summer, nor cold of winter, on dry land. He manures with peat or mud, in winter protects plants and fruits with evergreens, and has fine crops.

"In raising on high land, it would be well to select rather moist tillage, and use peat and muck for manure, which is their natural soil. We think that a black, moist, sandy loam would be best. It would be well to make experiments in the use of salt and other manure. Those plants that naturally grow on high land, would, doubtless, be better for this purpose.

"Natural meadows yield 100 to 200 bushels to the acre—100 is most common. By cultivation, in some instances, the yield has been at the rate of 200 to 300. With a rake, a hand will generally gather 15 to 20 bushels in a day. More experience is necessary to show a profit by high land culture, and the most successful mode; also the best mode of improving low lands. By setting thick, in transplanting, a good crop will be obtained sooner; and vines transplanted with sods will be the surest.

TO RAISE WATER BY THE SYPHON.

MESSRS. EDITORS:—Seeing in my "Farmer" for November, your letter of inquiry from JOSEPH BRIGGS, of Willet, N. Y., respecting Syphons, together with the answer of the editor, I take the liberty of offering Mr. B. the result of my experience in the Syphon line.

I have one in successful operation under the following circumstances. Water is conveyed to the house, a distance of sixty-six rods, over a ridge of land sixteen feet high, in half inch lead pipe, No. 1. It is discharged four feet lower than the surface of the water in the spring, and at the rate of eighteen gallons per hour. The pipe is thin, and had to be soldered in seven or eight places. I had a vast deal of trouble and tribulation with it before I got it tight, but it now works so beautifully, that I am satisfied. The whole question turns on this point. Syphons will continue to work, provided they are perfectly tight, and that there is a moderate amount of fall from the surface of the water in the well to the place of delivery. Water is raised in a Syphon on the same principle that it is in the suction pump, and may be elevated to the same height, to wit, thirty-two feet. The *objection* to raising it very high in a Syphon is that air separates from water when thus raised, and the higher it is drawn the more. It is essential that there should be sufficient current to carry out this air as fast as it is evolved, otherwise it would accumulate and stop the water. Four feet of fall answers the purpose in my case, but I do not believe that much less than that would do. The amount of fall required depends, of course, on the length of the Syphon.

Small beads of air issue from my pipe along with the water every minute or two, to ascertain the quantity of which, I collected them by means of a bottle of water and funnel inverted over the mouth of the pipe in the tub, and found the quantity to be one-half pint in twenty-four hours, or the bulk of one ounce of water to every fifty-four gallons.

I at first constructed, at a cost of some money and a great deal of labor, an apparatus similar to that described in Ewbanks' Hydraulics, for taking out the air at the summit, but I found it entirely unnecessary, nay worse than useless, and I have taken it out and have now only a plain pipe.

At one time despairing of getting the Syphon to work, I procured a *ram* and applied it, but the supply of water not being sufficient to keep it going, I made another examination of the places where the pipe was joined together, and fortunately discovered the cause of all the trouble I had had, which was an imperfection in the soldering; as soon as that was remedied, I had no further use for the ram.

With your permission I will make the following suggestions. If you do not wish to convey the water more than thirty rods, and if you have six feet or more of fall, I would recommend to use heavy three-eighths pipe, and if possible have it all in one piece. I think you can procure it so by ordering it from the manufacturer. It will deliver an abundant supply of water for any farm, will cost less and be less liable to get out of order than pipe of larger calibre. You are probably aware that the longer a tube is, the less water will pass through it in a given time and with the same amount of fall. In my case, half inch pipe is not too large. To avoid raising the water, I would dig the ditch four feet deep, or more, at the summit, if the nature of the ground will permit. Then to start it, it would doubtless be a good way to fill it before putting it down, as suggested by the editor of the Farmer, or you can charge it at any time with a common beer pump, which may be obtained at the hardware stores, without the counter fixings, for about twenty shillings. To adapt it to your purpose, you have only to attach about three feet of lead pipe to each end of it and fasten the wooden frame to a piece of plank large enough to stand on. It may be worked either as a suction or force pump, but I prefer the latter. To couple it to the Syphon, make a quill of hard wood, say locust, five inches long, and introduce one end of it into the Syphon and the other into the force pipe; then tie a piece of strong twine from one pipe to the other, leaving it slack in the middle, and then take a large nail and make it taut by twisting it after the manner of an old fashioned saw-strain. I charge my pipe in this way and the operation requires about twenty minutes of hard work. To do it by suction takes longer, and requires that the valves, couplings, &c., should be in perfect order.

As to *testing* the pipe, it must be borne in mind that when a Syphon leaks, water does not escape from it, but air sucks in: it is therefore not easy to detect an imperfection. I would recommend to start it and see if it continues to work. If it does not, you may be certain that it is not sound. A leak, if tolerably large, may be discovered by forcing water in *hard*, but air will enter through a crevice when water cannot readily be forced out. The pipe might be tested with an air-pump; if a perfect vacuum can be formed, you can rely upon it that it is all right. Do not on any account cover up the pipe till it is proven. O. P. LAIRD.—*Oneida Castle, N. Y., Nov.*, 1850.

TO REMEDY LEAKY ROOFS.

GENTS:—Hoping you, or some of your valuable and experienced correspondents, can suggest some cheap and practicable method of mending up old roofs that from cracks in the shingles, or otherwise have become leaky, I thought best to ask information through your widely circulated journal. I have a roof that has always leaked more or less from bad shingling, and it has defied my efforts, so far, to make it good by driving under shingles, to patch it as is customary in some places. It appears to me that some one knows of some cheap preparation or cement that will effect the object; and if so, those of us who do not know will feel greatly obliged if enlightened. A SUBSCRIBER.—*Schoolcraft, Mich., Nov.*, 1850.

Many are covering the roofs of buildings in this vicinity with pitch and fine gravel. Sheets of tarred paper are first put on the roof, which is covered with hot pitch, and a coating of lake gravel, put on while the pitch is hot. This forms a good roof, and we should think would be durable. It is about as expensive as shingling. We have seen roofs that leaked badly, remedied by putting hot coal tar on the shingles, carefully introducing the tar into all the crevices, and then covering with sand. Two coats put on in this way, we should judge from what we have seen, would prevent all leakage, and make an enduring roof. If a better method is known, we should be glad to publish it.

THE WIRE-WORM.

MESSRS. EDITORS:—I saw in your last number, information solicited as to the best mode of destroying the wire-worm, which makes such fearful work with our crops. I shall not say that I know of the best mode of utterly destroying them; yet I can give my experience, as little as it may be.

My father's farms is so full of them as to renrender useless all efforts to raise corn. I have known my father's corn crop to be entirely destroyed by them. Since I have had the control of it, I had one field that had been used as a meadow for several years. I plowed it in the fall, mistrusting that there were worms in it, though not to such an extent as to injure the crop materially. I plowed late, thinking it would destroy the eggs, if it did not destroy some of the worms, by freezing. I left it so until spring, and then planted it with corn, and I can say it looked fine the first time it was hoed; but all at once it looked yellow, and it was but a short time before half the field was destroyed.

I wish to notice here, that they never, or hardly ever, disturb it until the first plowing and hoeing, and then they go at it in earnest.

I followed the corn with two crops of oats. (The worms will not disturb oats or wheat as soon as they will corn; and if they do, it is not so easily discovered.) After the two oat crops, it was summer-fallowed and sowed to wheat, covering it completely with well-rotted manure, which was harrowed in with the wheat. The manure was drawn out for that purpose, and piled up. The wheat was sown this fall, and the result remains to be determined.

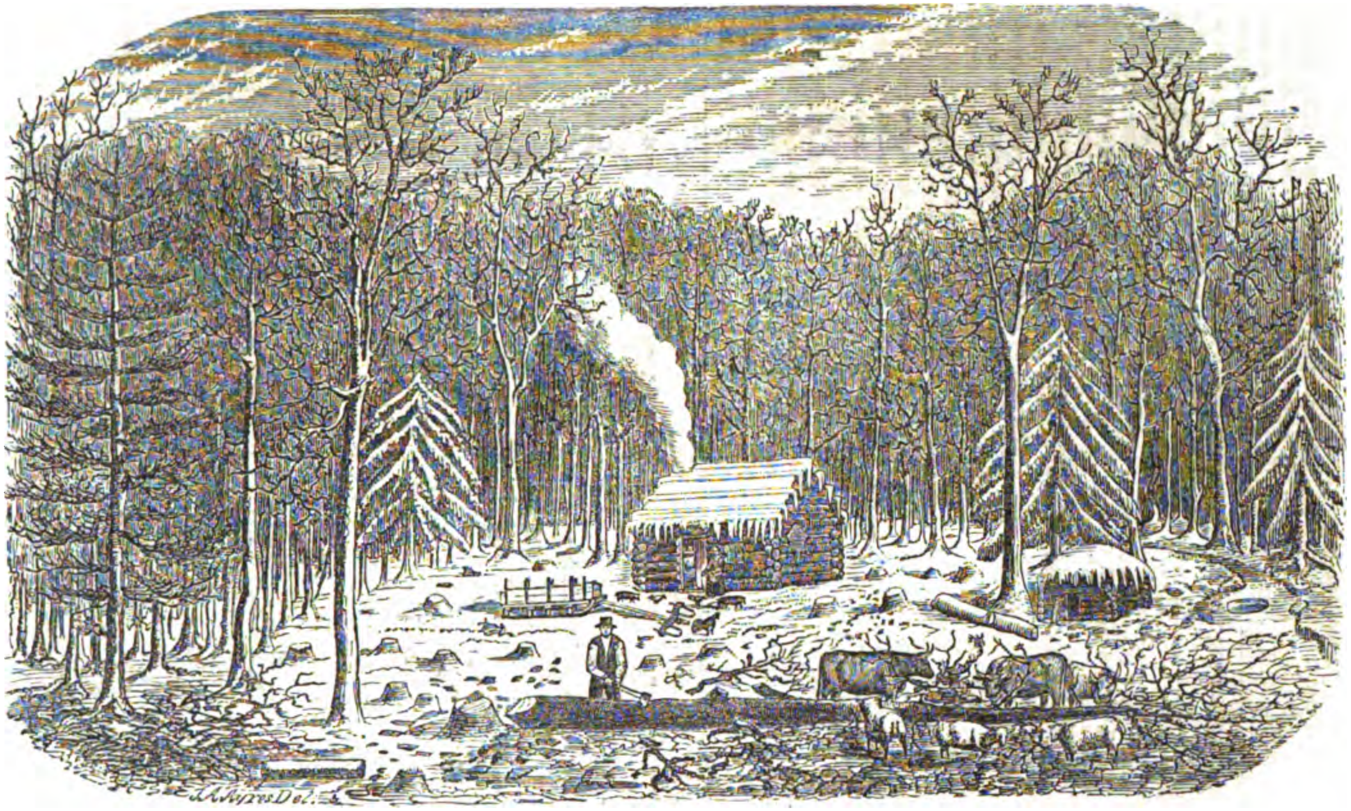
I do not consider the above mode as the right way or the best method of working land, except in the above case. I think the ground ought to be worked after it, and should not lay long if it is liable to be troubled with the worm; and to make up the deficiency for plowing and cropping so often, there must be a good crop of clover plowed in. But to get at the foundation of the matter, the ground should first be ditched or drained. I find even in doing as I have said, that they work into the ground again. They trouble grain most in wet places; and when plowing, they seem to be so thick in these wet places or hollows, that when the ground is seeded only one year, they work from these wet places and keep extending further from these hollows, and the longer the ground is left before being plowed up, the further they will extend: and if these hollows should be ditched, I think there would be no trouble; for they certainly do work in wet ground the most—there is always vegetation enough there to support them. First ditch the land, and then commence with coarse grain, and keep the ground clear, so that there will be nothing for them to live on, until you are satisfied it will be safe to sow wheat. It will run the ground; but sow your wheat, and put on a good coating of well-rotted manure, and you will have good wheat.

I think this is the best mode of applying manure to wheat—that when seeded down the seed catches much better, the wheat getting a top soon enough to prevent the sun from destroying the strength of the manure. A. E. R.—*Trumansburg, N. Y.*, 1850.

THE PIONEER

"Through the deep wilderness, where scarce the sun
Can cast his darts, along the winding path
The Pioneer is treading. In his grasp
Is his keen axe, that wondrous instrument,
That like the talisman, transforms
Deserts to fields and cities. He has left
The home in which his early years were past,
And, led by hope, and full of restless strength,
Has plunged within the forest, there to plant
His destiny. Beside some rapid stream
He rears his log-built cabin. When the chains
Of winter fetter Nature, and no sound
Disturbs the echoes of the dreary woods,
Save when some stem cracks sharply with the frost;
Then merrily rings his axe, and tree on tree
Crushes to the earth; and when the long keen night
Mantles the wilderness in solemn gloom,
He sits beside his ruddy hearth, and hears
The fierce wolf snarling at the cabin door,
Or through the lowly casement sees his eye
Gleam like a burning coal."

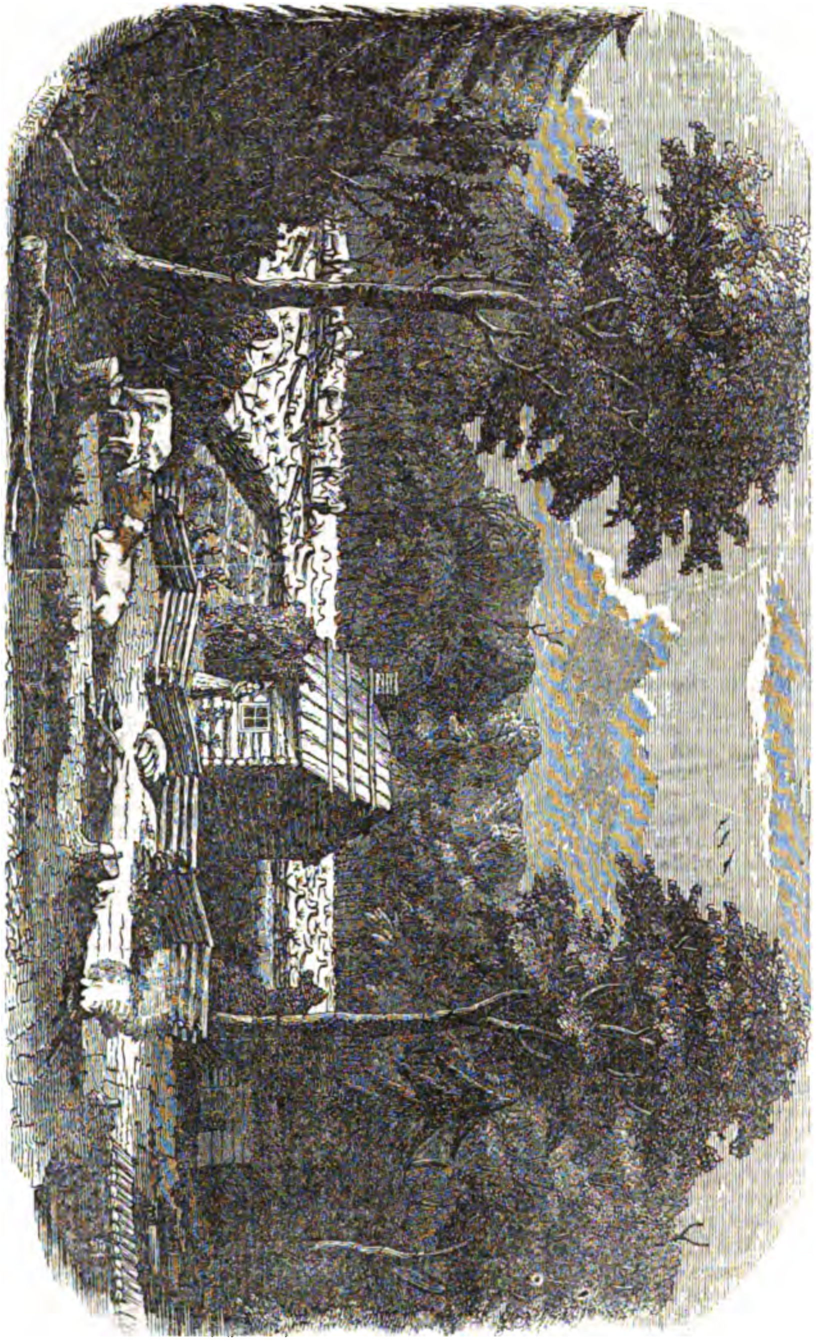
THERE is nothing so surprising to the foreigner, in the history of this country, as the rapidity with which the wilderness is transformed into fertile fields. Villages and cities arise as if by magic. The wolf and the panther are scarcely driven from their haunts, ere they are occupied by a teeming population. The screech of the owl scarcely dies away before it is succeeded by the scream of the locomotive—the hum of busy life, and the sound of the church-going bell. The secret of this is to be found in the love of independence, as general among our people, as it is honorable. How many young men, unused to toil and privation, have left their homes of comfort to endure the hardships and privations of pioneer life, for the honorable purpose of carving out their fortunes in a new land, and gaining that independence and competence they could not hope for in the land of their birth. But, while the young man, with a strong arm and an unconquerable determination, is prepared to cope with the difficulties of a new settlement, he is generally accompanied by one of more fragile form,


J. A. Ayres Del.

COMMENCING A SETTLEMENT IN THE WILDERNESS.

THE PIONEER has built a rude log house; cold weather came upon him before its completion, and froze the ground, so that he could not mix the straw mortar for his stick chimney, and that is dispensed with. He has taken possession of his new home. The oxen that are browsing, with the cow and three sheep; the two pigs and three fowls that his young wife is feeding from her folded apron; these, with a bed, two chairs, a pot and kettle, and a few other indispensable articles for house-keeping, few and scanty altogether, as may be supposed; for all were brought in upon that ox sled, through an underbrushed woods road: these constitute the bulk of his worldly wealth.

and gentler spirit, who endures privations he dreams not of. With an undying attachment to the husband of her choice, the young wife leaves the home, the friends and tender associations of her youth, to struggle for a home in a new land. She sorely feels the loss of kind and sympathizing friends, whose counsel and kind offices she more than ever needs. But active and laborious duties occupy her mind and hands; and though we fear some of these frail ones fall, crushed under by an undue weight of care and labor, many have the pleasure of seeing their once desert home—the log hut—transformed into a tasteful and elegant abode, and themselves surrounded with the comforts and elegancies of life. Who ever



FIRST SUMMER AT THE SETTLEMENT.

THE PIONEER has now chopped down a few acres, enclosed them with a rail fence in front, and a brush fence on the sides and in the rear. Around the house he has a small spot cleared of the timber, sufficient for a garden; but upon most of the opening he has made, he has only burned the brush; and corn, potatoes, beans, pumpkins, are growing among the logs. He has got a stick chimney added to his house. In the back ground of the picture, a logging bee is in progress. His wife is out, looking to the plants she has been rearing. A log bridge has been thrown across the stream. It is a rugged home in the wilderness as yet, but we have already the earnest of progress and improvement.

knew of a pioneer entering the woods without a partner to share his toils and joys, who did not retreat in disgust, or sink to the degraded level of the savage.

Western New York, particularly that portion known as the Holland Land Purchase, was settled very rapidly, and its history contains much of the romance of pioneer life. We are glad that its history has been written. Mr. O. TURNER has published a history of the Holland Purchase, which might be read by all with profit, and should be preserved by the old settlers and their children, as a memorial of their trials and triumph. It is from this work we take the fine engravings, showing the usual manner of commencing life in the woods.

S. W.'s NOTES FOR THE MONTH.

Life in the City of New York.—Get up as soon as you can see in the morning, and go into a corner grocery; there you will have the first reading of a morning paper. The floor is already swept and sanded with clean sea-beach sand. Directly in comes a female for a ready soaked mackerel, or a slice of ham, or a *cotalette* and a loaf for breakfast. When you hear her rich brogue, you will marvel that she demurs not to the extreme high price, which is here charged for each edible, the loaf excepted; but your surprise ceases when you are told that she is only a *servant*. "If you want to hear cheapening of prices," says the host, "come in the evening, when the Irish women are buying for themselves." For the next half hour, the shop is full of customers buying a modicum of all sorts for a single breakfast, from a pennyworth of salt or pepper, to bread, butter, and steak. Here are poor windfall apples, sold at 18¾ cts. the half peck, which cost only $1 50 the bbl. from the boats. Ohio grease, call it not butter, 22 cts. a lb., a line or leg of mutton, or a chop, at 12½ cts. a lb., a beef's tongue for 63 cts., and a pair of chickens for 75 cts. There are thousands of families here, in costly brick houses, constructed with iron balconies and all the modern ornaments, who live in this expensive, shiftless manner, without a tub of pork, a cheese, a crock of butter, or a whole ham in the house, to say nothing of a barrel of potatoes or apples. But that which strikes one from the country most painfully, in city life, is the confined, impure air. Here is no yard room fit either for a child to breathe or play in, and how can a child acquire a physical education without pure air, room to play, and grass to fall upon, instead of a stone flag or curb-stone. In the more tidy parts of the town, the sidewalks are washed every morning, in fact half of Biddy's business seems to be swabbing the sidewalks, or running of errands, while another female attends to the *menage* within. But such near neighbors are filth and neatness, that often in the same street you pass in a few moments from clean gutters and well scrubbed flags, to sidewalks fetid and slippery, and gutters of black alkaline mud, giving off an effluvia as invaluable to vegetable life, as it is poisonous to the genus *Homo*. One of the comforts of city life is the ease and cheapness with which you can travel for miles together in the omnipresent omnibus; only one cent for a ferriage, and six cents for a ride, if you please, of almost as many miles. 'Tis true that those stage horses do not trot as fast as an unsophisticated country mare, but then you have the novelty of seeing a constant change of faces at all stopping places, and the comfort of riding, almost without exception, with well dressed, tidy people, more than half of whom are fresh looking females in their best attire.

The influence of California gold in N. Y., at this time, is apparent in many business transactions, and more especially in the increased prices of many articles of luxury, and the avidity with which they are sought. I have been in Wall street, in panic times, when almost every other face looked care-worn and anxious—and in a jobbing house when every five minutes after noon till three o'clock, some agitated, sorrowing man would come in and put the query, "anything over to-day?" At this time such a needy sentence was never uttered in my presence. Instead of thoughtful faces in Wall street, every visage there looked happy, contented, and *unintellectual* enough, as Greely said our farmers' faces looked at the State Fair. So much for California gold. May we never have cause to exclaim *auri sacra fames*!!

Indian Corn.—Twenty years ago very little more Indian Corn was grown by our farmers than sufficed to fat their pork and beef, and to make a little hasty pudding; the little surplus sold to distillers was never threshed before January—no one dreamed that corn was fit to shell until seasoned by the frosts of winter. But, as the French say, "all things are changed now." At this time, 20th November, more than 15,000 bu. of new corn have already been purchased by our distillers from the farmers, and the quantity now coming in daily from Seneca and Wayne, often exceeds 1000 bu., all of which is paid for at 47 cts. per bushel.

The day has at length arrived, when our farmers begin to appreciate the value of a crop of Indian corn, not less for its intrinsic value, than from its certainty to mature, even in adverse seasons. They have also learned, by dear experience, that time and labor, and the use of land, in a half-manured, half-tended field of corn, brings no remuneration; while the best of culture, and a judicious manuring, is bountifully paid for by the redundant crop.

Waste Fields of Undrained Land.—An Oneida county farmer, who has just passed through the south towns of Seneca county, says that ditching and more farm stock, are the two great wants, or rather lacks, of the farmers on the great plateau of Varick and Romulus. It was painful to him to see fence rotting around large and arable fields, grown up with aquatic weeds, incapable of producing even grass, in their present unditched state. He seemed to think that throughout one county, there was a paucity of farm stock, without which the grain-bearing pabulum in the soil would soon fail from the lack of nitrogenous matter. In counting the cost of stock raising, few farmers give credit for the manure made, and capable of being made by the growing animal. I once heard a farmer in Rhode Island say, that every hog at a year old, had made seven dollars worth of manure in his pen. *Waterloo, Nov.*, 1850.

TAKE CARE OF THE CATTLE.

Messrs. Editors:—Few realize the importance of providing shelter for live stock during the colds and storms of winter. I hazard the opinion that the saving in food, and the benefit to cattle, will pay the cost of constructing suitable shelter in two years. And then the satisfaction of knowing that the cattle are comfortable, makes the farmer himself comfortable. I never see live stock in a yard, during the hard storms of winter, without feeling pain, and setting down the owner as a shiftless or heartless man. Perhaps in this I am not always correct; but I can't help feeling so. If we endeavor to cheat our land, we cheat ourselves; and if we are cruel to our cattle, neglecting to provide them suitable food and shelter, we are unjust to ourselves; and our punishment is sure and certain, and in proportion to our crime. This is the order of Providence, and it is just. I know of no better way to waste food than to let stock winter out, in which case they will eat a third more food than if well housed, and then be much poorer in the spring. Perhaps a hint on the subject at this season of the year, may not be thrown away. In these remarks I have stated the opinions derived from my own experience. J.

Horticultural Department.

EDITED BY P. BARRY.

One of the most prevalent errors in the management of small plantations of trees in door-yards, or in the vicinity of dwellings, is the pruning or cutting off the side branches to such a height as to destroy, in a great measure, the natural character and symmetry of every individual tree composing the plantation. In our own city, we cannot pass ten rods along any of the old streets occupied with private dwellings, without meeting with an example of this kind. Beautiful little front gardens that might accommodate four or five fine, perfectly grown trees or shrubs, are encumbered with a dozen skeltons so deformed by continual mutilations that without the leaves, it is difficult to determine what they are. In all our older villages, numerous examples of the same kind are to be met with, and it seems to be rapidly spreading. We desire, therefore, to call attention to it, as a point in the management of small gardens and door yards, that stand greatly in need of reform.

The evil originates, in most cases, in the planting. When a man builds a house on a new lot of ground, entirely destitute of trees, if he plant at all, he does so with a view, *above all things*, to *immediate effect*; and this is all very well, if the after management were conducted properly, but this is very seldom the case. Without looking ten years ahead, he goes on and plants twice or three times the number of trees that his ground can properly accommodate, even at ten years' growth, and he makes no provision for removing a portion to make room for the others. In a few years the branches begin to meet, the view from the windows of the house is probably too much obstructed, and something must be done. It would be too bad to remove any after having planted and cultivated them until they have just attained a respectable size. To wait seven years, or, perhaps, ten years, for a tree to grow, and then mercilessly cut it down or dig it up, is a thing that cannot be done under any circumstances; but it can be "pruned up," and so all the lower branches that are coming in contact with one another are hewn down. This is the mode of "thinning" to which nearly all our door-yard plantations are subjected. *Evergreens*, even, are not exempted. It is not at all rare to see balsam firs, spruce, &c., &c., "trimmed up" six or eight feet from the ground, making them, to our eyes, perfectly hideous, compared with their natural pyramidal form, clothed with branches from the bottom.

Now we do not deny but that it is perfectly right in planting new grounds to do something for immediate effect. This is an important point in forming all new plantations, large or small. We should no more think of planting a small piece of ground, that we wished to devote to ornamental trees, with the precise number that would cover the space after they had attained full size, than we should of thinning by cutting off the branches. The one course would be little better than the other. Suppose the case of a small front garden, thirty by fifty feet: now, two trees of any kind that grow as large as a horse chestnut, will fill such a space, in twenty years, to the exclusion of everything else; but for the first seven or eight years, two such trees would occupy but a small portion of the ground, and would afford abundant space for the introduction of several other ornamental plants or shrubs without any detriment to them whatever, and which would add greatly to the beauty of the plot. We would, therefore, plant the permanent trees in the places where they ought to be, taking pains to ascertain the size such trees usually attained, how far their heads usually spread, &c.; and then, in the remainder of the ground, we should plant some flowering shrubs, pillar roses, and such things as we could from time to time remove, as the growth of those we wished to retain required it. And in planting these temporary articles, we should always place them in such a manner that a part can be removed before the whole. Two may be planted and remain for three or four years, where only one afterwards would be required. In some cases, where shelter is an important point aimed at in planting front gardens, twice, or even three times, the number of trees can be planted, and at the end of five or six years be thinned out. All door-yard trees should be considered as intended for ornament, and hence it is absolutely necessary that they be not constrained or mutilated in their growth. Their branches should have ample room to spread in the natural way. All pines, firs, larches, &c., should be branched from the ground. In this form alone do they show their natural grandeur. Other trees may be pruned to different heights, from four feet to eight, in small places. Unless where some particular object may render it necessary, no trees should be pruned above seven or eight feet, and then the heads should have full scope.

We see another error frequently committed in very small places, and that is, planting a tree with a wide spreading head where there is no room for it, say between the front of the house and the street, in ten or twelve feet of space. Trees with spreading heads, such as the horse chestnut, ailanthus, maple, or elm, are quite inappropriate for such small places, and will be continually in the way, getting their branches cut off for venturing to go where they are not wanted. The proper subjects for such places are those with compact heads, like the European mountain ash; or pyramidal, like the firs. A tree should never be planted for ornament where it cannot fully develop its natural character. In very small places in front of street houses, a climbing rose, trained on a tasteful trellis, is a much more ornamental screen than a tree, and a flowering shrub of some sort that will bear cutting, if necessary, may be planted to fill up. No matter when, or what we plant, we ought to consider well the appropriateness of the subject for the place where it is to be planted. The man who has half an acre to plant or embellish, can plant a very different class of trees from the one who has only a rod or two. As a general thing, people are too apt to plant what their neighbor has planted, whether their circumstances be alike or not. To plant tastefully and properly, we must exercise, in all respects, a careful discrimination. We cannot here treat the subject so minutely as we could wish, but we trust it will not be altogether in vain that we have pointed out some prevalent errors on the subject, and made a few suggestions as to which we consider the proper mode of proceeding.

We have thought it might be well to add a few measurements indicating the rate of growth of a few of the trees most commonly planted. These measurements are of specimens in our own grounds, planted in 1840 and '41, of the ordinary size of such trees when taken from the nursery.

Horse Chestnuts—Fifteen feet high, trunk twenty inches in circumference near the ground, and head ten feet wide.

Mountain Ash—Twenty feet high, trunk two feet in circumference, and head twelve feet wide.

European Linden—Twenty-five feet high, trunk two feet in circumference near the ground, and head eighteen feet wide.

Ailanthus—Twenty-five to thirty feet high, trunk two and a half feet in circumference, and head fifteen feet wide.

Laburnum—Eighteen feet high, trunk fifteen inches in circumference, and head five feet wide.

Larch—Twenty-five to thirty feet high, trunk, at the ground, two feet in circumference, lower branches twenty feet wide.

Pawlonia—Four years growth in all—Eighteen feet high, trunk seven feet high and eighteen inches in circumference, and head twelve feet wide.

Norway Spruce—Twenty to twenty-five feet high, trunk twenty to twenty-four inches in circumference near the ground, and width of lower branches sixteen to twenty feet.

Balsam Fir—Twenty to twenty-five feet high, trunk sixteen to eighteen inches in circumference at the ground, and width of lower branches ten to fifteen feet.

European Silver Fir—Planted ten years ago, then five feet high; now twenty feet high, trunk, near the ground, two feet in circumference, and width of lower branches ten feet.

The *Weeping Willow* and *Snowy Abele* would nearly, if not quite, double in growth any we have noticed.

DAHLIAS

The past season, on the whole, was highly favorable for the dahlias. The early part was rather moist, inducing a rank growth and but few good flowers; but October was dry and clear, without frost, and brought them out in great perfection. We have never seen so many varieties, and so good, exhibited here before, as at our last autumnal show; and the attention given to a critical examination of their individual characters and qualities, by many of our citizens, showed the existence and growth of a discriminating taste. Until very lately, with us, a dahlia was but a dahlia. Most of those who planted them in their garden, were well enough pleased to have a flower approaching double, if it had a color to their taste; but now we find that the qualities that make up a perfect flower begin to be looked into, and novelties, in the way of rare and striking combinations of colors, are, in a measure, appreciated. Every year this taste must improve, provided our professional growers take care to bring out only first rate flowers, and discard everything that is poor or indifferent. We look upon a poor dahlia as one of the meanest floral productions that can be presented; whilst a really good one, is one of the proudest triumphs of modern floricultural skill.

In looking over the English papers, we gather from the accounts of the dahlia shows of 1850, that the following varieties have been the most successful in obtaining prizes:

Duke of Wellington,
Thames Bank Hero,
Fearless,
Magnificent,
Richard Cobden,
Mrs. Seldon,
Beauty of Hastings,
Purple Standard,
Yellow Standard,
Queen of the Isles,
Essex Triumph,
Mr. Seldon,
Toison d'Or,
Snowflake,
Scarlet Gem,
Queen of Primroses,
Keepsake,
Flying Dutchman,
Princess Radziwill,
Shylock,
Black Prince.

Reports all speak well for the advance of the fancy varieties to perfection. It is expected they will soon be as unique in this respect, as ordinary varieties. Among the new sorts of these, *Elizabeth*, *Comte de Flanders*, *Miss Blackmore*, *Emperor de Maroc*, *Striata Perfecta*, *Jenny Lind*, *Flying Dutchman*, and *Unique*, seem to have taken the lead.

In our own collection, we have noted a few that, considering all their properties, can hardly be surpassed. In estimating the value of a dahlia, we take into strict account its free or shy blooming. If a dahlia be ever so good, as to form and color of flower, and yet a *shy* bloomer, we discard it; for in our climate, we *must* have free bloomers, or the chances are ten to one, in most seasons, that we shall not get a flower at all.

Audibert—Golden yellow, very large.

Baron de Morelle—Pale blush, marked with lilac, very large and perfect. Did not see a poor flower during the season of about three months. We noted it as the best we have seen of its color.

Bunte von Estenthall—Deep crimson, richly shaded with bronze and purple.

Belle de St. Lawrence—Blush broadly tipped with deep purple.

Delight—White, tipped with deep purple.

Faure de St. Hilaire—Small, very globular, a delicate fawn color. Very regular and pretty, but too apt to have an open center.

Furst Wolkonsky—Very large, a rich, dark, velvety crimson.

Grafen Hohenthall—White, lightly tipped with lilac.

Jo Triumphant—Clear, beautiful lilac.

Liebliche von Elstenthall—Very striking and beautiful—primrose yellow tipped with white, like *Florence Dombey*.

Lass of Clarendon—Creamy white.

Indispensable White—Pure white, very large.

Isis—Lemon yellow, tipped with bronze.

Norman Hero—Scarlet, with a crimson shade—very large.

Pfarrar Kraus—Dark claret.

Prince of Cobourg—Purplish crimson.

Reine d' Or—Golden yellow, lightly edged with red.

Princess Alice—White.

Princess Radziwill—White ground, deeply edged and laced with purple.

Sir E. Antrobus—Fiery crimson.

Toison d' Or—Buff, beautiful.

Triomph de Meaux—Buff, shaded with salmon.

Triomph Magdebury—Scarlet, tipped with white—very showy.

William Sedelazck—Small and globular, purplish lilac—a wonderfully profuse bloomer.

Wunder von Tattendorf—A magnificent show flower, scarlet, shaded with bronze.

Here we have twenty-five varieties that, taken as free bloomers and good flowers, may be safely recommended. We might go on and add twenty-five more, perhaps, as good. Indeed, if some other persons were called on to select twenty-five from the same collection, they would probably select different ones, in many cases. Some are comparatively old, being several years in cultivation, like *Indispensable White*, *Princess Alice*, and *Sir E. Antrobus*, but we see none, in their way, superior. None are quite new, though several, as *Toison d'Or*, *Princess Radziwill*, and some others, are among the first prize dahlias of 1850 in England, as will be seen by the list we have given.

THE PLUM AS A PYRAMIDAL TREE.

We find the following article, on this subject, in the "Gardener's Chronicle," (London,) no doubt from the pen of Mr. Rivers. We look upon root pruning as destined to be a great aid in adapting trees to small gardens. During the past summer, in August, at a dry time, when growth was nearly suspended, we root-pruned some pyramidal cherry trees that bid fair to exceed the bounds allotted to them. We cut them so short that their leaves flagged, as a pot plant suffering from drought; but we gave them a good watering, which set all right. There was no more wood made during the season, but fruit-buds were developed profusely. We have served many of our specimen plum trees the same way, and thus hope not only to hasten their bearing, but greatly diminish the extent of surface which our specimens would otherwise cover. It can be done at any time during the winter. The article quoted below, explains the operation as clearly as words can do it.

"The Plum as a Pyramidal Tree.—For some few years I have amused myself by forming my plum trees into pyramids, feeling convinced that no other mode of cultivating our hardy fruits is so eligible for small gardens. I was induced to take extra pains, on accouut of observing that our neighbours the French, so famous in their cultivation of pyramids, failed to a certain extent with the plum; as their trees, I observed, on being pruned to that shape made too vigorous shoots, and were inclined to gum. They do not know the value of root-pruning, and will not listen to it; I do, and therefore felt some hope of success. At first I commenced to root-prune once in two or three years, but I soon found that was not enough, for the plum makes roots so rapidly that it is difficult to check it: I have now, therefore, for the last three years root-pruned annually, early in autumn. My success is perfect; this I have generally done in September, soon after gathering the fruit, but this year not having any fruit, and awakened by your article on 'Summer Root-Pruning,' given in *Gardeners' Chronicle* in July, I operated on them in August; the trees almost immediately went to rest, and are now pictures of forthcoming fruitfulness. The operation is so simple, that any one may exercise it without any fear of failure. Let me attempt to describe it; and yet how irksome it is to have to employ so many words about what one can tell and do in a few minutes. Open a circular trench, 18 inches deep (for the plum does not root deeply) round by one tree 18 inches from its stem; for the first two or three years this distance will be enough; increase the diameter of the circle as years roll on, but very slowly, not more than from 1 to 2 inches in a year, and cut off every root and fibre with a sharp knife. This operation may be likened to the manner in which old folks talk of the way in which they used to cut the hair of poor workhouse boys, viz., place a basin on the boy's head and trim off the hair round its rim—in short, the 'workhouse cut;' then when your roots are so trimed, introduce a spade under one side of the tree and heave it over, so as not to leave a single tap root. Fill in the mould; if the weather is dry give the tree a soaking of water, and it is finished. If your soil is poor, give a top-dressing of manure, to be washed in by winter rains. The following summer, pinch off the ends, in June, of any shoots that seem inclined to push more than 4 inches, and thin those out with the knife that are too crowded; the result will be a handsome and highly prolific pyramidal tree. Plums are not yet half appreciated; for, owing to the introduction of many new and good varieties they are in season from July till November, for the dessert and for the kitchen."

EXHIBITION OF FRUITS.

An exhibition of Fruits will be held in Rochester, on Saturday, the 11th of January. Specimens can be brought, or sent, to Mr. Fogg's Seed store, on Front street. The opportunity will be excellent for a comparison of all our best winter varieties; and as most people, at that season of the year, enjoy comparative leisure, and as the roads will most likely be good, there will be every inducement for all who are interested in fruit culture, to attend. We expect to see visitors and contributors from Buffalo and other neighboring towns, and to have a highly interesting time.

The annual meeting of the State Society, will be held at Albany immediately after, and specimens from our exhibition will be forwarded. James H. Watts, Esq., has kindly volunteered his services to attend to the packing and forwarding of fruits designed to be shown at the exhibition of the State Society.

ACKNOWLEDGEMENTS.

We are indebted to R. G. Pardee, Esq., of Palmyra, for a package of seeds marked "Polk Squash," one foot long, four inches in diameter, dark green when ripe—very superior. A package of "Hair's New Mammoth Dwarf Marrow Pea;" and one of "Celery Lettuce."

—To E. A. McKay, Esq., of Naples, N. Y., for beautiful specimens of the *Baily Sweet* apple, measuring twelve inches in circumference, and of the richest crimson color. The *quality*, too, is quite equal to the size and beauty. Mr. McKay also sends us a box of Isabella grapes from his vineyard; bunches large, fruit well ripened and fine. We visited this vineyard last summer and found it in the best possible condition.

—To W.D. Brinkle, M. D., Philadelphia, for a copy of the Annual Report of the Pennsylvania Horticultural Society.

—To Hon. M. P. Wilder, of Boston, chairman of the Massachusetts Committee on the Great Industrial Exhibition, for a document containing the regulations for forwarding articles from that State.

—To Jesse Storrs, Esq., of Marathon, N. Y., for a box of the *Munson Sweet* apple, to be presented at the exhibition on the 11th inst.

—To W. G. Verplanck, of Geneva, and A. Mackie, of Clyde, for specimens of the *Sheldon* pear. We shall have something to say of this variety by and by.

TRELLISES FOR CLIMBING OR TWINING SHRUBS AND PLANTS.

We are frequently astonished at the degree of beauty produced by the simplest contrivances, under the direction of a little taste. We have seen little log cabins transformed into masses of foliage and flowers, with scarlet runners and morning glorys (convolvulus) trained up on simple strings, costing not more, perhaps, than an hour's labor. Without these flowers, such a dwelling would indicate a tasteless and comfortless occupant; but with them, it appears cheerful and pleasant and tasteful. There is much that is graceful and beautiful about climbing plants, and they grow with such rapidity, and are so easily trained into the most fanciful forms, that they are among the most useful material for the embellishment of cottages and small gardens. Only imagine an unpretending cottage or farm-house half buried in festoons and garlands of honeysuckles, clematises, and roses, and in the front garden two or three, or even one pillar of roses, or fanciful trellis of some fine climber; and then imagine the same cottage naked as it came from the hands of the builder, and you have a contrast that illustrates, in some degree, what any man can do with a few simple climbers, for the embellishment of his dwelling. We frequently see in gardens some very clumsy, awkward affairs, made by some skillful carpenter, no doubt, as supports for climbers. There are many of them around this very city of ours, of shapes we could not describe, and as ugly, we are very sure, as can be found elsewhere; any one of them, including the white paint that has been lavished on it, would certainly cost as much as half a dozen vastly more tasteful and beautiful. We have seen very neat supports, like figure 1, for cobeas, maurandias, &c., made by taking young cedars or pines two or three inches in diameter and six to eight feet high, stripping off the foliage, and leaving a foot of the lower branches and less of the upper ones, so that a string or wire carried from top to bottom all around, made a pyramid. About two feet of the bottom was cleared of branches entirely, and sunk in the ground. Three or four of these placed near each other, with the strings or wires carried from the top of one to the other, make pretty festoons with rapid growing, luxuriant plants.

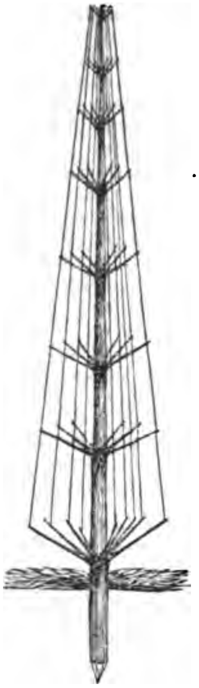


Fig. 1.

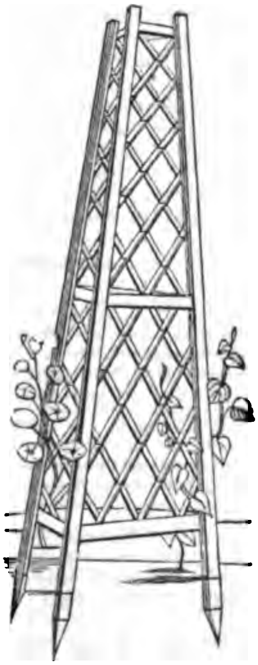


Fig. 2.

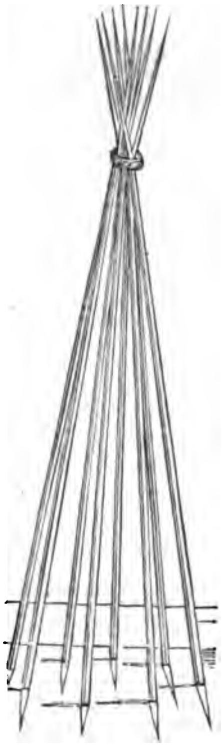


Fig. 3.

Figure 2 is a very tasteful conical, three side support, made of light strips of timber—if preferred rustic, of saplings with the bark on. It may be six or eight feet high, and should be placed at least two feet in the ground. The plants or seeds intended to cover it, may be set in the center of the space between the feet. It will answer equally well for climbing roses, honeysuckles, cobeas, maurandias, ipomœas, or annuals such as convolvulus or scarlet runners.

Figure 3 is an exceedingly simple pyramidal support, and looks very well. It is simply eight or ten slender poles or rods eight to ten feet, or any required height. They are spread at the bottom and tied together at the top. A very slight catch in the ground will sustain them.

Figure 4 is a very simple and pretty spiral support for slender stemmed climbing plants. It is made of a round piece of wood three or four inches in diameter, and of the height required—say four or five feet. A piece of strong wire is then fastened on one end and wound round in spiral form to the other. At each turn the wire will present the appearance of a ring on each side of the stick. When carried to the other end, it is there fastened and the wire is left between the two ends loose and elastic. If the support be only three or four feet high, it will be sufficient to insert it in the earth eighteen inches to two feet; but if higher, it should be planted in the socket of an iron fork that would be sunk in the ground at least eighteen inches.

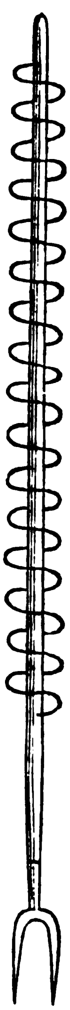
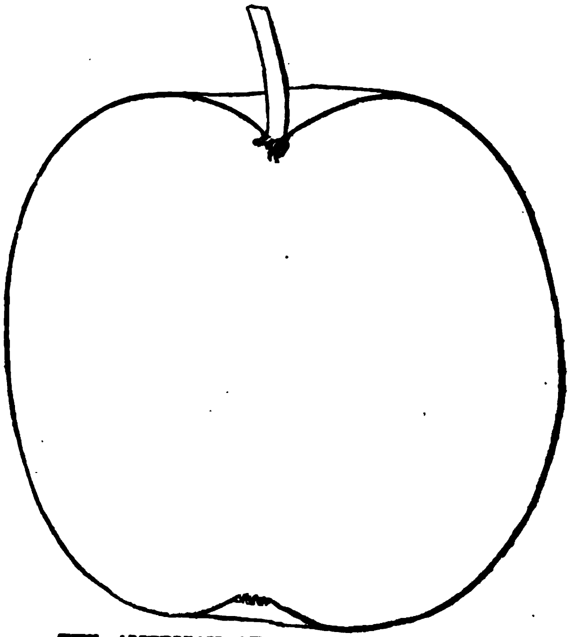


Fig. 4.

Any ingenious person of a little taste and a *will*, might contrive many such articles, quite as simple and as ornamental as those we have figured. We have given these by way of drawing attention to the subject; and we have given them at this time particularly, because there are few persons who do not find occasionally, during winter, a leisure honr that might well be devoted to the preparation of some such articles, that might be both useful and ornamental to the garden next summer. Many feel the want of such structures in the summer season, and would gladly drepare them, but their time is then occupied.



THE AMERICAN SUMMER PEARMAIN

To our taste, this has no superior among the apples of its season. It is extensively cultivated in New Jersey, and some Jerseymen in Western New York have it under the name of "*Strawberry.*" The tree is a slow grower, with dark, slender, erect shoots. It comes early into bearing, and bears abundantly. Fruit medium size, sometimes large, oblong. Color greenish yellow, nearly covered with broken stripes and spots of red. Stalk three-quurters of an inch long. Calyx in a smooth, even, pretty deep cavity. Flesh yellowish, juicy, very tender and rich; mild acid; usually cracks in falling from the tree. In eating five or six weeks. Few summer apples remain in use through so long a period, and so fine throughout, as this; and we find it equally as desirable for the kitchen as for the table. This and the *Pomme Royal*, or *Dyer*, ripening at the same time, or immediately after, are, in our estimation, the two best late summer and early fall apples we have.

THE CHAUMONTEL PEAR.

We find by experience that this famous fruit cannot be produced in any degree of perfection, except on *warm*, *dry*, and *rich* soils. This season we had several bearing trees, as it happened, all on low ground, rather heavy, and quite damp, and the season, too, was moist. We did not get any fruit worth gathering, although some four or five trees were loaded.

Those who have this variety in their collection will therefore do well to see that it is supplied with a soil possessing these essential qualities. If they do not, we can only assure them of a miserable harvest. For an early winter variety it has probably no superior. The tree is vigorous and fruitful; bears quite young, and the fruit ripens with as little care as *Fall Pippins*. It is certainly worthy of a little special pains in its culture.

Those who have Lima beans not sufficiently ripened for seed, will find them excellent for the table.

STRAWBERRIES.

Mr. Editor:—In the spring of 1849, I procured plants enough to set four rows, of twenty-six feet in length, the rows a little over a foot apart, and the plants nearly a foot apart in the rows. They were of two different kinds—one a large red berry, supposed to be Hovey's Seedling, originally from Col. Young's nursery; the other a small white berry,* cultivated by the late Mr. Strachan, of Half Moon, and we need no better authority that the article is good.—They were planted on the back part of a large garden which had been planted alternately to corn and potatoes during the ten years I have owned it. The manure that has been used, was common barn-yard manure; the soil a clay loam. No manure was used at the time of planting the bed, nor since. They were designed to be kept in rows, but the runners soon getting the mastery, I let them take their own course, merely pulling out the weeds by hand. This spring the edges of the bed were trimmed to six feet in width, by twenty-eight feet long, from which was picked twenty-four quarts that were taken to the house and measured, to say nothing of those that were eaten from the vines by birds and bipeds. Beat this who can.—Isaac Clement.—*Half Moon*, 1850.

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*Probably the *White Alpine*.—Ed.

SMALL EXPERIMENTS.

I take particular pleasure in making experiments in my garden, and you are at liberty to use the following results if it will interest your readers:

1st. My experiments with ten selected kinds of peas, resulted in favor of the *Early Emperor* as the best very early pea; and in *Hair's New Mammoth Dwarf Marrow Pea* as the largest, most productive and richest pea of all. I obtained the seed from Thorburn, New York.

2d. My experiments with eight kinds of early potatoes, resulted, all things considered, in favor of the *Mercers*. Some kinds were a few days earlier, but not so good quality or so great bearers.

3d. My earliest corn is a white corn, a hybrid from the *Early Canada* and *Early Sweet Corn*. It originated in this county. My earliest *sweet* corn is the *Early Burlington*. But I think decidedly the *best* sweet corn I have ever raised or seen, has a dark purple, smooth berry, (I do not know the name,) brought from New England.

4th. Our "Celery Lettuce" is by far the best I have ever seen. The choicest imported kinds will not compare with it.

5th. Out of the twelve kinds of strawberries, the greatest uniform bearer, and highest flavor of the pistillate plants, is *Burr's New Pine*; of the staminate, a strawberry recently imported from Lord Spencer's garden, in England, which is thought to be the *London Imperial Scarlet*. This will suffice for the present; but more anon. R. G. P.—*Palmyra*, 1850.

Celery is a luxury that too few enjoy. Placed in a box of earth in the cellar, it will keep well till spring, and rather improve by the keeping. *Cauliflower*, too, that have not headed in the garden, if the roots are placed in mould in one corner of the cellar, will head, and furnish a real luxury during the winter months.

Ladies' Department.

HOME-MADE FURNITURE.

However much satisfaction some may derive from costly furniture, the production of the cabinet shop, yet, there is far more real pleasure in having articles around us, the work of our own hands, the results of our own skill, or the production of those we love. How we value some article, trifling in itself, perhaps, yet more prized than its weight of gold, because the work of some dear departed one. Let us furnish our homes with the fruits of our own industry, as much as possible, and thus leave behind us, on every side, evidence of our skill. Any one who has money can buy splendid furniture, (and it dont take much wit to get money,) but it is not every one who has the patience and ingenuity to make a pretty chair from an old barrel, or a neat footstool out of a few pieces of board or a useless box. Yet this may be done—we have seen it done—and we have had some little hand in the work. Those who have not tried, will be surprised to find what pretty articles of furniture they can make, almost without cost. The following remarks, with the engravings, are from *Downing's Country Houses:*

"The simplest and cheapest kind of furniture by which an air of taste may be given to a cottage, consists of a plain box or bench, made of boards, by the hands of the master of the dwelling, stuffed with hay, corn-husks, moss, or hair, held in place by a covering of coarse canvass, and covered with chintz by the mistress of the cottage. Seats of all kinds are made at a very trifling cost in this way, so that, with a little ingenuity, a room may, by the aid of a few boards nailed together, a little stuffing and canvass, and a few yards of shilling chintz, be made to produce nearly the same effect as one where the furniture is worth ten times as much. The next step is to add square pillows or cushions to all the benches, seats, or couches, in order that any person sitting upon them may have a support for his back without touching the wall.

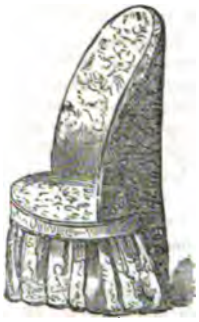

FIG. 1.

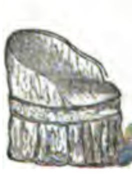

FIG. 2.

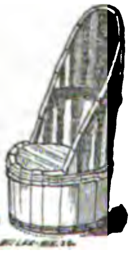

FIG. 3.

"Another of the cheapest and simplest seats for a cottage, is the *barrel-chair.* Fig. 1 is a large one, stuffed in the seat and back. Fig. 2 is a low one, for the chimney corner. These chairs are easily made by sawing off a portion of the barrel—nailing on a few boards to form the seat, and leaving part of the staves a little higher than the others, to form the To make the high-backed chair, the *pieced out* a little, as in Fig. 3, the of the back being confined in its place by a piece of hoop, neatly applied. The seat and back are stuffed with any cheap material, covered with strong coarse canvass, and covered with chintz.

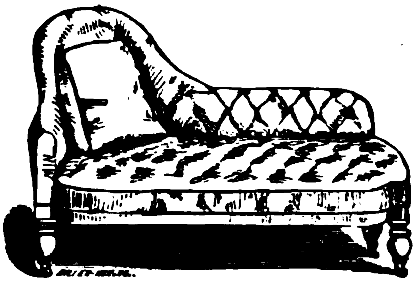

FIG. 4.

Fig. 4 is a cottage couch, of a somewhat superior style, but made in the same manner, and easily produced, when there is a little mechanical ingenuity in the family."

THE DEATH OF THE FLOWERS.

The following beautiful poem, by Bryant, many have read, yet it is so beautiful that it should be preserved. We give it in the Farmer, that all our readers may have it in a shape to preserve.

The melancholy days are come, the saddest of the year,
Of wailing winds, and naked woods, and meadows brown and sere.
Heaped in the hollows of the grove, the withered leaves lie dead;
They rustle to the eddying gust and to the rabbit's tread.
The robin and the wren are flown, and from the shrub the jay,
And from the wood-top calls the crow through all the gloomy day.

Where are the flowers, the fair young flowers, that lately sprung and stood
In brighter light and softer airs, a beauteous sisterhood?
Alas! they all are in their graves; the gentle race of flowers
Are lying in their lowly beds with the fair and good of ours.
The rain is falling where they lie; but the cold November rain
Calls not from out the gloomy earth the lovely ones again.

The wind-flower and the violet, they perished long ago,
And the wild-rose and the orchis died amid the summer glow;
But on the hill the golden-rod, and the aster in the wood,
And the yellow sun-flower by the brook in autumn beauty stood,
Till fell the frost from the clear cold heaven, as falls the plague on men,
And the brightness of their smile was gone from upland glade, and glen.

And now, when comes the calm, mild day, as still such days will come,
To call the squirrel and the bee from out their winter home,
When the sound of dropping nuts is heard, though all the trees are still,
And twinkle in the smoky light the waters of the rill,
The south wind searches for the flowers whose fragrance late he bore,
And sighs to find them in the wood and by the stream no more.

And then I think of one who in her youthful beauty died,
The fair meek blossom that grew up and faded by my side:
In the c[illegible] moist earth we laid her when the for[illegible] cast the leaf,
And we wept that one so lovely should have a life so brief;
Yet not unmeet it was that one like that young friend of ours,
So gentle, and so beautiful, should perish with the flowers.

Youths' Department.

WONDERS OF VEGETATION.

How important it is to improve every moment of time, the young seldom realize. They look forward to many years of life, and heed not the moments they lose. Few, however, can look back upon the past year without feeling regret for misspent time. It is too late now—a lost moment can never be recovered. But what a glorious time the beginning of a new year presents to make new determinations—to resolve that every minute in the future shall be well employed. See to it, young friends, and in the YOUTH'S DEPARTMENT of the Farmer we will endeavor to furnish material for the profitable employment of a few moments each month. Perhaps we could not better employ the space for a few numbers, than in presenting some of the *wonders of the vegetable world.*

The vegetation which everywhere adorns the surface of the globe, from the moss that covers the weather-worn stone, to the cedar that crowns the mountain, is replete with matter for reflection and admiration. Not a tree that lifts its branches aloft, nor a flower or leaf that expands beneath the sunlight, but has something of habit or of structure—something of form, of fragrance, or of color—to arrest the attention. It is true that early and constant familiarity has a tendency to render us unobservant of that which surrounds us; but that individual must be idle, and ignorant as idle, whose curiosity cannot be awakened by a description of the wonderful mechanism and adaptations of vegetable life.

> " Not a plant, a leaf, a flower, but contains
> A folio volume. We may read, and read,
> And read again, and still find something new—
> Something to please, something to instruct,
> Even in the noisome weed."

REPRODUCTION AND DISPERSION OF PLANTS.

Plants are reproduced by seeds; by tubers, as the potatoe; by runners, as the strawberry; by slips, and some even by single leaves; and to produce others of its kind, seems to be the main object of every plant or tree. First we have the leaf, then the blossom and the seed, ready to produce another of its kind. Increase by seed is the most familiar mode of reproduction, being common to all flowering plants, and these seeds are furnished with sufficient nutriment for the young plant, till its roots have struck into the soil and its leaves expanded into the atmosphere. They are also protected from accident, and though each differently, yet all mysteriously and wonderfully. The chestnut has a compact leathery envelope; the seed of the apple a fleshy covering, enclosing horny cells, in which is the seed; the pea and the bean a pod of parchment. In all of them, the protection against cold, drouth, moisture, and other destructive agencies, is so complete that seeds which have been buried for centuries, have, on being brought to the surface, sprung up into healthy plants; even a crop of wheat has been reared from seeds taken from the hand of an Egyptian mummy more than three thousand years old!

Equally perfect with this protection is the means for their dispersion over the surface of the globe. What could be better adapted for floating from island to island than the cocoa-nut, with its light fibrous coir and woody shell? What more easily caught up by the slightest breath of air, than the seeds of the thistle or dandelion, with their little parachutes of down? Or what more aptly fitted for attachment to the coats of wandering animals than the hooked heads of the teasel and burdock? The farmer well knows how readily a small patch of weeds will scatter their seeds over the whole field.

AGAVE AMERICANA.

The *Agave Americana* is one of the most singular and wonderful of plants. It is known as the "*Great American Aloe,*" because resembling the Aloe in its leaves, but it belongs to the pine-apple tribe, and has little in common with the aloes. It is, perhaps, most generally known as the *Century Plant,* as it was supposed to flower only once in a hundred years, but the plant, in favorable circumstances, flowers much earlier than this. When in bloom they present a most interesting spectacle, the stem rising from 30 to 40 feet high, and bearing hundreds of greenish-white flowers on an elegant branched spike. The panicle, or bunch of fresh flowers, is often 15 feet in height, and is, in this respect, without a parallel. The engraving, although the best we could obtain, does not show fairly the beauty of the plant in flower. We saw one in bloom in Europe, and it was the most magnificent spectacle in the vegetable line we ever beheld.

FOR THE BOYS.—Seven classes of company to be avoided: 1st, Those who ridicule their parents or disobey their commands. 2d, Those who profane the Sabbath or scoff at religion. 3d, Those who use profane or filthy language. 4th, Those who are unfaithful, play truant, and waste their time in idleness. 5th, Those that are of a quarrelsome temper, and are apt to get into difficulty with others. 6th, Those who are addicted to lying and stealing. 7th, Those who are of a cruel disposition; who take pleasure in torturing and maiming animals and insects.

IN our travels the coming spring, we shall undoubtedly see many things worthy of notice in our *Youth's Department.* We shall probably give some engravings of scenes we may witness in our sojournings.

Editor's Table.

The World's Industrial Exhibition.—So much interest is felt in the Great World's Fair, to take place in London next spring, that we long since determined to give the readers of the Farmer as full and correct an account as possible. To do this, we shall mingle with the immense crowds of all nations that will there assemble, and review the great contest for ourselves. We rejoice that the "good time" so long "coming" has at length arrived, when the strife between the nations is not for the supremacy of brute force, but the supremacy of intelligence and skill. Chinere, Turks, French, English, and Americans, will there vie with each other for the prize to be awarded superior skill. This assembling of the nations must greatly tend to destroy national pride, ignorance and prejudice, the great source of war. We hope to see many things at the fair, as well as in our travels through the country, an account of which will be interesting and profitable to our readers.

Perhaps nothing at the fair will attract more universal attention than the building now erecting for the exhibition. The materials of which it is to be made, and the mode of construction, is something novel in the art of building. We copy the following graphic sketch from a late number of the *Leeds Mercury* :

We cannot but think that the palace of glass—an unprecedented fabric, to receive the unprecedented Exhibition of the World's Industry in 1851—the daring conception of Mr Paxton, will itself form one of the most attractive and wonder-exciting features of the Exhibition : nay, that it will be almost as fascinating to men's imaginations before they see it, and to their eyes when they see it, as the boundless treasures of the Exhibition itself. Assuming that the strength of this singular edifice has been deemed sufficient by competent architects, as we doubt not it has, the Commissioners have judged well to set aside every other architectural project in its favor. It will form a magnificent and dazzling spectacle, and of course it will give the utmost advantage of light to every article that may be exhibited within it. The reader may be enabled to form some conception of this palace of glass, when we state that it will be 1848 feet in length, that is, more than one-third of a mile—that it will be 408 feet broad—that it will be open from end to end, and that the great centre aisle, running from east to west of the length we have stated, will be 66 feet in height, whilst there will be a transept running from north to south, 408 feet long and 108 feet high, or higher than the nave of the loftiest cathedral in England, and enclosing a row of noble elms now standing in the park, and which will remain untouched. Though different portions will be of different heights, the whole will be under one unbroken ceiling of glass. The area of the edifice will be 753.984 square feet (nearly 18 acres,) and its cubic contents 33,000,000 feet. The exhibiting surface, including galleries, will be 21 acres. The palace will be supported by 3230 iron columns of beautiful design. There will be 900,000 superficial feet of glass, sufficiently strong to resist storm or violence, weighing upwards of 400 tons. The cost of building and maintaining the structure will be £79,800, and if the materials were not to be returned to the contractors, it would be £150,000. The structure will be provided with canvass blinds on the south front and roof, to gaurd against excessive light and heat. Its refreshment rooms will enclose three groves of trees. Ample ventilation will be supplied—there being 5000 superficial feet of ventilators in the transept alone. The architectural form of the palace will be very elegant. It will consist of three stories, the upper ones receding behind the lower ; each story to be formed by fluted pillars and arches of iron, with walls of glass, and to be surmounted by an ornamental and friese architrave. The design of the endless range of arches is very tasteful. The roofs will be nearly flat, but will consist of a series of ridges and valleys, 8 feet wide, so formed as easily to carry off the rain. The whole structure will be so light (in both senses of the word) and airy, that it will look like a work of enchantment. It will not exactly be raised as quickly as Aladdin's palace, but almost, as the shell is to be complete by the 1st of January. If future Arabian Nights' Entertainments should be written, the tale-tellers must flog their lazy imaginations ; for the magic of former ages has become the plain matter of fact of the present.

At the Anniversary Meeting of the Mechanics' Institution, of Derby, England, Mr. Paxton gave the following singular and interesting account of the origin and acceptance of his design.

Mr. Paxton said, he would commence by stating that, gigantic as the building was, it was conceived and framed by him in a small space of time. He need not, however, remind them that it was not done without a great deal of forethought, aided by the experience he had had in constructing other great buildings. When the six eminent architects and engineers were selected as a committee to choose a design, he (Mr. Paxton) had no intention of offering one, for he took for granted that something worthy of the occasion and of the nation would be selected by them. When the time approached for the production of plans, there was a discussion in the newspapers as to the design best adapted, and he must say that the first sketch he saw in a number of the *Builder* did not inspire him with any very exhalted notions, or raise any very splendid expectations of the result. It was not until one morning when he was present with his friend Mr. Ellis, at an early sitting in the House of Commons, that the idea of sending in a design occurred to him. A conversation took place between them with reference to the construction of the new House of Commons, in the course of which he (Mr. Paxton) observed that he was afraid they would also commit a blunder in the building for the Industrial Exhibition ; adding, that he had a notion in his head, and that if he (Mr. Ellis) would accompany him to the Board of Trade he would ascertain whether it was too late to send in a design. He asked the Executive Committee whether they were so far committed to the plans as to be precluded from receiving another ; the reply was, "Certainly not ; the specifications will be out in a fortnight, but there is no reason why a clause should not be introduced allowing of the reception of another design." He (Mr. P.) said, "Well, if you will introduce such a clause, I will go home, and in nine days hence I will bring you my plans all complete." No doubt the executive thought him a conceited fellow, and that what he said was nearer akin to romance than to common sense. Well, this was on Friday, the 11th of June. From London he went to the Menai Straits to see the third tube of the Britannia Bridge placed, and on his return to Derby he had to attend to some business at the Board Room, during which, however, his whole mind was devoted to his project ; and whilst the business proceeded he sketched his design on a large sheet of blotting-paper. (Applause.) He was sorry he had not the original with him, but the fact was Mrs. Paxton had taken possession of it, and if they were at all anxious to see it, the only possible way of gratifying their desire was by sending for her to the meeting. (Laughter and applause.) Well, having sketched his design on blotting-paper he sat up all night until he had worked it out to his own satisfaction ; and by the aid of his friend Mr. Barlow, on the 15th, he was enabled to complete the whole of the plans by the Saturday following, on which day he left Rowsley for London. On arriving at the Derby station he met Mr. Robert Stephenson, a member of the Building Committee, who was also on his way to the Metropolis. Mr. Stephenson minutely examined the plans, and became thoroughly engrossed with them, until at length he exclaimed that the design was just the thing, and he only wished it had been submitted to the committee in time. Mr. Stephenson, however, laid the plans before the committee, and at first the idea was rather pooh-poohed ; but they gradually grew in favor, and by publishing the design in the *Illustrated News*, and shewing the advantage of such an erection over one composed of 15 millions of bricks and other materials, which would have to be removed at a great loss, the committee did in the end reject the abortion of a child of their own, and unanimously recommended his bantling. [Applause.] He was bound to say that he had been treated by the committee with great fairness. Mr. Brunel, the author of the great dome he belived, was at first so wedded to his own plan, that he would hardly look at his. Mr. Brunel, however, was a gentleman, and a man of fairness, and listened with every attention to all that could be urged in favor of his [Mr. Paxton's] plans. As an instance of that gentleman's very creditable conduct he [Mr. P.] would mention that a difficulty presented itself to the committee as to what was to be done with the large trees, and it was gravely suggested that they should be walled in. He [Mr. P.] remarked that he could cover the trees without any difficulty ; when Mr. Brunel asked, "Do you know their height?" He [Mr. Paxton] acknowledged that he did not. On the following morning Mr. Brunel called at Devonshire House, and gave him the measurement of the trees, which he had taken early that morning ; adding, "Although I mean to try to win with my own plan, I will give you all the information I can." [Applause.] Having given this preliminary explanation of the origin and execution of his design, Mr. P. would pass over the question of merit, leaving that to be discussed and decided by others, when the whole shall have been completed.

The engraving of this building with which we intend to supply each subscriber, now (Dec. 12th) nearly completed, will cost us about *five hundred dollars*, and if we are as successful in the remainder of the work, as we have been thus far, it will be at least one of the best wood engravings ever got up in this section of country. It was engraved by Miller & Mix, of this city.

* * *

The New York State Agriculrural Fair for 1851.—The last State Fair being held at Albany, and the one previous at Syracuse, and it being understood that the next Fair would be located somewhere in Western New York, the citizens of Rochester, have been making some exertions to secure the selection of this city as the place for holding the fair for 1851. Our citizens have very liberally subscribed the necessary funds for the erection of buildings, &c., and intend to present the claims of our city to the consideration of the Society. We know of no good reason why the next fair should not be held here. If so, we hope the time set will not be earlier than the third or fourth week of September, as most of the farmers in this section are busy sowing wheat early in September. We think, too, we can beat the world in a show of fruit, and we are anxious that the fair should be held at a time when we can show the fruits of Western New York in their highest excellence and greatest abundance.

* * *

Winter Show of Fruits, &c.—The Horticultural Society of the Valley of the Genesee have a winter show of fruits, in this city, on the 11th of January. The annual meeting of the Monroe Agricultural Society will be held on the same day.

Terms of the Farmer.—In consequence of a notice which was not as carefully worded as it should have been, some have misunderstood the terms of the Farmer for the present year. They are the same as last—Fifty Cents a year for single copies; *five copies* for $2, being *forty cents each*; and *eight* copies for $3, being *three shillings each.* For the engraving of the *Great Glass House*, we charge nothing, making it a present to our subscribers.

Postage on Books.—To accommodate those who are entitled to premiums, and to whom we shall have to send books by mail, we have secured a number of nearly all our advertised books, bound with paper covers. The dollar books bound in this way, cost but six shillings, and the six shilling books fifty cents. The postage on these books range from ten to fifteen cents.

Western Horticultural Review.—This is a new Horticultural Magazine, published at Cincinnati, by John A. Warder, M. D., Editor and Proprietor. It is beautifully printed, and deserves to be well supported by the fruit-growers of the great west.

Several pages of communications, and other articles prepared for this number, are crowded out; among them some queries that we shall answer next month.

PREMIUMS FOR 1851!

The editors of the Genesee Farmer have circulated in premiums, and in other ways, during the past year, over Five Hundred Dollars worth of the best Agricultural Books published in this country. These works, on *Agricultural Chemistry, Geology, Botany, Horticulture, Gardening, Rural Architecture, Farm Economy, the Management of Sheep, Horses, &c., The Treatment of Diseased Animals, &c.*, we believe have exerted, and will continue to exert a very beneficial influence. Their influence is not confined to those who receive them, but is felt by their children, their friends and neighbors. They must increase the knowledge, and consequently the power, the influence and the wealth of those for whose especial benefit we labor. The coming year it is not our intention to decrease, but rather to increase the circulation of these works.—With a view, therefore, to this object and to extend the circulation and increase the usefulness of the Genesee Farmer, we offer the following liberal premiums to the friends of Rural Improvement who may interest themselves in obtaining us subscribers.

Premiums to Individuals.

1st. TWENTY Dollars, in Agricultural Books, to the person who shall send us the largest number of subscribers, at the club prices, before the 15th day of April next, so that we may announce the successful competitors in the May number.

2d. FIFTEEN Dollars, in Agricultural Books, to the person who shall send us the second highest list, as above

3d. TEN Dollars, in Agricultural Books, to the person who shall send us the third highest list, as above.

In order to make the circulation of the books more general, and to reward *every one* of the friends of the Farmer for their exertions in its behalf, we will give to those not entitled to any of the above premiums,

1st. To every person who sends us Sixteen subscribers, at our club terms of *three shillings each*, Johnston's Lectures on Practical Agriculture, (paper cover) Cole's Disease of Animals, American Fruit Book, or any other good Agricultural work valued at Fifty cents.

2d. To every person sending us Twenty-Four subscribers, as above, Norton's Elements of Scientific Agriculture, Allen's Domestic Animals, Buist's Kitchen Gardener, Johnston's Lectures on Practical Agriculture, (nicely bound,) or any other Agricultural work valued at Seventy-five cents.

3d. To any person ordering Thirty-Two copies of the Farmer, The American Farm Book, Thomas' Fruit Culturist, The American Shepherd, or any other good Agricultural work which sells at One Dollar.

4th. For Forty, Johnston's Agricultural Chemistry, Boussingault's Rural Economy, Downing's Fruits & Fruit Trees of America, or any other book or books valued at One Dollar and Fifty cents.

For larger numbers, books given at about the same proportion

County and Town Premiums.

To aid as much as possible in establishing County and Town Agricultural Libraries, we offer the following premiums, which we hope will aid in the more general establishment of Agricultural Libraries in the Towns and Counties.

1st. We will give an Agricultural Library worth FIFTY DOLLARS, to the County in which the greatest number of copies of the Genesee Farmer is taken by the 16th of April next. This Library to be kept as a County Agricultural Library under the care of the Agricultural Society.

2d. To the Town in which the greatest number of copies is taken, an Agricultural Library worth THIRTY DOLLARS, to be kept as a Town Agricultural Library, under the care of the Town Agricultural Society, if one is established, if not, under the care of some person or persons appointed by the subscribers themselves.

As the above premiums will probably be taken in the State of New York, and as we wish to give our friends in other States an equal chance in the competition, we offer the same premiums to the Counties and Towns OUT OF THE STATE OF NEW YORK, thus:

1st. To the *County out of the State of New York* in which the greatest number of copies of our paper is taken, an Agricultural Library worth FIFTY DOLLARS.

2d. To the *Town out of the State of New York* in which the greatest number is taken, an Agricultural Library worth THIRTY DOLLARS.

Individuals will receive the premiums to which they may be entitled, for their individual benefit, as a compensation for their personal exertions, and the number they send will be credited to the Towns and Counties where the papers are sent, so that the premiums to individuals will not at all interfere with the Town and County premiums.

BACK VOLUMES of the Farmer will be furnished, if desired, and counted the same as new subscribers.

☞ That all Post-Masters, Local Agents, and Subscribers, wherever the Farmer circulates, may have a fair and equal chance to obtain the Premiums, *traveling agents, post-riders, residents of Rochester, and all city booksellers* are not included in our offer, except the offer of books for a definite number, (16, 24, 32, &c.)

We shall keep a correct account of the subscribers sent by each person, county and town. In the March and April numbers of the Farmer we will publish a statement, so that all may know the prospect of success, and act accordingly. In the May number we shall announce the premiums.

Libraries and *Books* will be forwarded per order, immediately after the announcement, and persons or societies can select their own books, or leave the selection to us.

☞ Specimen numbers, show-bills, &c., sent to all post-paid applicants. All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at the risk of the publisher.

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The Publisher of the Farmer keeps constantly on hand a large assortment of the most popular and valuable works pertaining to Agriculture, Horticulture, and Rural and Domestic Economy, which will be sold at the lowest cash prices. The names and prices of a portion of the books are annexed:

American Agriculture, by Allen. $1.
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American Shepherd, by Morrell. $1.
American Veterinarian, by Cole. 50 cents.
Buell's Farmer's Companion. 75 cents.
Buist's Kitchen Gardener. 75 cents.
Chaptal's Agricultural Chemistry. 50 cents
Coleman's Continental Agriculture. $1.
Complete Farmer. $1.
Cole's American Fruit Book. 50 cents.
Domestic Animals, by R. L. Allen. Cloth, 75 cts.; paper, 50 cts.
Downing's Fruits and Fruit Trees of America. $1 50.
Downing's Landscape Gardening. $3 50.
Essay on Manures. 25 cents.
Farmer's and Emigrant's Hand-Book. $1
Farmer's Manual.
Gardener's Farmer's Dictionary. $1 50.
Home Doctor. 25 cents.
Horse Doctor. 25 cents.
Horse's Foot—and how to keep it sound. 25 cents.
Johnson's Agricultural Chemistry. $1 25.
Johnson's Dictionary of Gardening $1 75
Kirby & Spencer's Entomology. $2.
Knowlson's Complete Farrier, or Horse Doctor. 25 cents.
Ladies' Companion to the Flower Garden. $1 25.
Liebgig's Agricultural Chemistry, (new edition.) $1; paper, 75 cts.
Liebgig's Agricultural and Animal Chemistry, [pamphlet editions.] 25 cents each.
Loudon's Ladies' Flower Garden. $1 25.
Mason's Farrier and Stud Book. $1.
Miner's Bee-Keeper's Manual. $1.
Norton's Elements of Scientific Agriculture. 50 cents.
Poultry Book, by Bennett. 75 cents.
Rural Economy, by Boussingault. $1 25.
Scientific Agriculture, by Rodgers. 75 cents
Stable Economy, by Stewart. $1.
The Bird Fancier. 50 cents.
Treatise on Milch Cows. 38 cents.
Trees of America. $4.
Youatt on the Pig. 75 cents.

⁂ These books can be safely forwarded by mail to any part of the country.

☞ Orders from a distance will receive prompt attention, and the books forwarded by Mail or Express as desired.

Agricultural and Horticultural Implements, and Field and Garden Seeds.

UPWARDS of *one hundred* kinds of Plows, and a corresponding variety of all other implements for the farmer, planter, and gardner; embracing the largest and most complete assortment to be found in the United States. Also, Field and Garden Seeds—a large and varied assortment. A. B. ALLEN & CO.,
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Gen. Farmer Office, Rochester, June, 1850. [6-tf]

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A MONTHLY JOURNAL OF

AGRIÇULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, Fruits, &c.

VOLUME XII, FOR 1851.

DANIEL LEE & JAMES VICK, JR., EDITORS.
P. BARRY, Conductor of Horticultural Department

IN issuing a Prospectus for the TWELFTH Volume of the Genesee Farmer, the Publisher flatters himself that it is too widely known, too extensively circulated, and too well read, to render it necessary to state at length the design of the work. Those who read the Farmer are the best judges of its value, and those unacquainted with it are requested to examine its pages.

We number among our Contributors, hundreds of the best Practical Farmers in the country, and our readers have through our pages, the benefit of their wisdom and experience. No thinking man can read any number we issue, without receiving some useful hint in regard to the management of crops, stock, or the orchard, of more value than the price of the volume. The GENESEE FARMER is by far the cheapest Agricultural Journal published in America. Our TWENTY THOUSAND SUBSCRIBERS place us ahead of all other Agricultural Journals, and enables us to furnish a paper for the trifling sum of *Three or Four Shillings*, equal to any, both in *value* and *beauty*. That we have done this thus far, our friends and readers will bear us witness. But we intend more fully to accomplish this in the volume for 1851. The GENESEE FARMER is truly the *Practical and Scientific Farmer's Own Paper!* It will continue to be edited by the old Editors, assisted by a host of the best practical Farmers, Gardeners and Horticulturists in the country.

The new volume will commence on the 1st of January, 1851. It will be published in the best style, as heretofore—on HANDSOME and CLEAR TYPE and *superior paper*. The volume will be APPROPRIATELY ILLULTRATED—containing numerous and expensive Engravings of *Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Flowers, Shrubs, &c* ☞ Each number will contain TWENTY-FOUR ROYAL OCTAVO PAGES! making a large and handsome volume of about 300 pages, (with Title Page, Index, &c., suitable for binding,) at the close of the year.

An earnest advocate of improvement of both the *Mind* and the *Soil*, the FARMER seeks to advance the Rural interests of the country, and elevate the profession of Agriculture to its proper position. To accomplish this, it has labored long and faithfully, and not without some success. Its position as the *cheapest*, and, at least, one of the BEST AGRICULTURAL JOURNALS in the country, is fully established, and we confidently ask for it that support which it merits from the Farmers, Gardeners and Fruit Culturists of the U. States. Grateful for the unexampled patronage already extended to the Farmer, we solicit the aid and co-operation of all its friends and readers to increase the circulation and thus augment the usefulness of the *cheapest Agricultural Magazine* ever offered to the American Public. We invite all who feel the importance of sustaining this work, and extending its usefulness, not only to subscribe themselves, but introduce it to the patronage of their friends.

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☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ POST-MASTERS, AGENTS, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

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DANIEL LEE,
Rochester. New York

December, 1849.

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Nos. 12 and 14 Front st.
Rochester, Nov. 1, 1850. [11-3t]

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Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—FEBRUARY, 1851. NO. 2.

ON FATTENING DOMESTIC ANIMALS.

In an admirable lecture before the Society of Arts, Mr. Mechi, of England, says: "I believe it is the great quantity of stock kept that enables the Lothian farmer to compete at so great a distance with the south-country farmer; and I believe it is the still greater quantity of stock kept by Mr. McCulloch, of Auchness, that enabled him to surpass the Lothian farmers. Mr. Lawes has shown most indisputably, in his admirable papers in the Royal Agricultural Society's Journals, that we can produce manure cheaper and better by feeding stock than by purchasing guano."

The economical production of beef, pork, and mutton, and thereby securing a large increase of manure, is an object of the first importance on every well managed farm. A great many cultivators in this country have yet to learn that it is quite as easy to consume and finally exhaust the fertilizing elements in the subsoil, by deep tillage and selling all the crops, as it is to impoverish the surface soil by shallow plowing and sending the cream of the land to distant markets. Both practices are part and parcel of the same unwise system of agriculture. Each cubic foot of the reader's soil will weigh 100 pounds on an average—some more, some less—exclusive of water or moisture. If it contains one part in 1600 of potash, it is better in that regard than the average of land twenty-five years in cultivation. As there are 1600 ounces in 100 pounds, of course a fair soil contains but an ounce of potash in a cubic foot; and of this not over a dram, or the eighth of an ounce, is available for any one crop, or perhaps for any five, owing to the circumstance that seven-eighths of this alkali exists in the same condition in the earth that potash, soda, and lime occupy in window-glass, *i. e.*, it exists in the shape of an insoluble silicate of potash. Now, it matters not what food is fed to animals, very little of the potash, and less of the soluble silica taken out of the soil in such food, remains in the system. These, and other earthy elements of crops, appear in the droppings or excretæ, and can be restored to the ground whence they were extracted. But if a dram of potash is sent to market in hay, potatoes, grain, or other products, from each cubic foot of soil, or if it be wasted at home, how is the farmer to replace that quantity of alkali in every cubic foot of his impoverished fields? Very few of our readers have any just appreciation of the intrinsic value of the raw material of human food and raiment.

Mr. Mechi says that a million tons of oil-cake are imported into England every year; and in a recent debate in Parliament, on the question of allowing the out-going tenant a fair compensation for unexpended manure applied to land, it was decided by a vote of the House, that the manure made from a ton of oil-cake is worth half the cost of the cake. A motion to regard the manure made by grain at half the cost of the grain, was first carried, then re-considered and lost. We should have voted in the affirmative on both of the above questions—denying the right of any tenant or landlord to remove more of the earthy elements of bread and meat from the soil than he applied to it. The natural fruitfulness of the earth, whether the estate be entailed or not, belongs to no one generation exclusively; therefore, to rob the earth of its phosphorus, potash, magnesia, soda, and chlorine, is an obvious wrong which can be justified only on the ground of an immediate and pressing necessity.

It is now the great business of American canals, railroads, river, lake, and foreign commerce, to convey to distant markets the raw material of cotton, grain, and provisions, drawn from one hundred million acres of virgin soil. When our turn comes to seek a million tons of oil-cake worth $15 a ton for manure, where shall we find it? So long as our subsoils abound in the elements of wheat and cotton, deep plowing, subsoiling, and growing clover, will bring them to the surface; but after the bone-earth and potash are finally consumed in staples sent to the sea-board, or are dissolved by tillage and washed into creeks, rivers, and lakes—*what then?* Then, and we fear not before, we shall begin to fatten neat cattle, hogs, and sheep, in a way to save every particle of their droppings, by feeding them on open floors with a tight basement.

Speaking of this open-floor and cellar arrangement, Mr. Mechi remarks: "Experience has taught me, and will teach others, in order to succeed in farming, we must produce a much larger quantity of meat on our farms than at present, and at less cost. In order to do this, it becomes necessary to consume a large portion of the straw of the farm, cut into chaff, and *cook it with meal and ground oil-cake.* We are thus deprived of the usual cattle-bedding, and must find a substitute. Having practiced the system rather extensively, I will communicate to you the details; observing that although attended, as every system must be, with certain disadvantages, the balance of benefit is sufficiently considerable to induce me to continue and extend it. The quantity of stock I now have on boards (slats) is, 100 lambs, 50 sheep, 60 calves, 30 bullocks, 10 cows, and 200 pigs. I measured the hoofs of the various animals, and arranged my openings accordingly. For bullocks, the space between the slats or boards is 1⅞ inches; sheep, 1¼ inches; pigs, ditto; small pigs and lambs, 1 inch; calves, 1⅝ inches.

"One can not too highly appreciate the system on heavy lands, where animals can not be profitably folded during winter. The area allowed to each animal and its feeding apparatus, is thus:

	Superficial feet.
Small sheep,	8
Large do.	10
Small bullocks,	30 to 40
Large do.	50 to 60
Small pigs,	6 to 8
Large do.	9 to 11

"Very much depends on the season and weather. In cold weather, pigs and bullocks can scarcely be packed too close, so long as there is room for them to lie down comfortably. Sheep require a little more room and ventilation. In fact it requires a nice observation to adjust the ventilation and temperature. This is best done by a thermometer, because our own feelings are not always a sufficient criterion. Every cattle shed should feel as comfortable and warm as a drawing room. The opening for ventilation should be at the highest point. My bullocks are groomed daily by a boy, whose sole occupation it is. The cost is about one farthing a head per week, and I am sure it pays. [Pays the owner of the cattle, but not the boy.] Before I leave the open boards, I should say that the bars or planks may be either of straight yellow deals [pine] or straight-grained hard wood. The latter are to be preferred for heavy animals, as they wear off the edges of deals. I should say that we never sweep the floor; but the animals are perfectly clean. Of course the manure is taken out at once to the field, without the interventional expense of a double carting, shooting, or turning over a dung heap. The effect on the crops is unmistakable. I am quite sure the system is very advantageous. It is true we like a soft bed, and so do animals; but our medical advisers recommend a hard one.

"There is a powerful development of muscles on boards — so much so, that with fattening pigs not bred on boards, I have found some of them get capped hocks. It is surprising how fast you may fatten your pigs on these floors. They find it inconvenient to run about, so divide their time between eating and sleeping—a most agreeable operation for the account book. My old bailiff admits that, on the turning-out system, two-thirds of my farm would be required to feed my animals; now they make shift with one-third. If you desire a good appetite for your animals, turn them out in the cold for exercise. On asking the boy how they got on, he replied: 'Oh, sir, they get on properly well now, they come in so hungry.' This settled the question in my mind; but those who doubt the facts, can make experiments. There can be no doubt the animals are perfectly healthy on these boards. Considering the confinement and heat, this rather surprises me, especially with pigs fed entirely on meal; for the ammonia or effluvia from under them, is powerful enough to discolor paint. The great difficulty I find, is in getting a proper fixer of ammonia. I have used sulphuric acid, ashes, and various matters, with a certain effect. I hope the Irish peat charcoal will not be too dear; I have a ton coming on trial. After all, I am inclined to think common salt, or the common dried clay, is the cheapest fixer, and I have used a great deal."

Well dried and finely pulverized clay is one of the best and cheapest absorbents of the gases from the dung heap. In preparing nightsoil for transportation, the Chinese have used dried clay for unknown ages. To escape the attacks of flies, which in summer are very troublesome to cattle, Mr. **Mechi** keeps his stables dark. He says, "if you have ten million of flies, not one will bite in the dark." Mr. M. has a steam engine for grinding coarse grain, cutting straw and turneps, and steaming food.

Of course, if all farmers were to go extensively into the production of meat, the market would soon be overstocked and the article become valueless; but there is little danger of such a result. It is too easy to skin the soil, as immense herds of buffaloes are slaughtered for their hides and tongues alone, for many to engage in any system of farming which restores in manure as much of the elements of fertility as is removed in crops. To purchase oil-cake or guano enough to form 100 bushels of wheat or corn for every 100 sold off the farm, is a policy not soon to come into general favor in this country. But after the virgin earth has parted with the raw material for making bread and meat, to the depth of two feet, then we shall begin to consider the supreme folly of wasting fertilizers enough every year, as we now do, to form one thousand million bushels of corn. This immense loss is not likely to be any less during the next twenty-five years; and it will tell most against the deepest tilled land, which now yields the best crops, provided their earthy elements are not restored to it. Unless it can be shown that each cubic foot of soil contains an unlimited quantity of *bones*, or the material to form them, it is easy to see that, to be ever extracting phosphate of lime in grass, grain, roots, cotton, hemp, sugar-cane, and tobacco, and sending these products off the farm, must inevitably consume all the bone-earth in the soil, within the reach of any cultivated plants. Whatever minerals American soils lose by leaching and in crops, must some day be restored to it, if not from Great Britian, from the great deep, or some other source. We can no better afford to cultivate 100 acres to grow 1000 bushels of wheat, than the farmers of England can. Why, then, should we not attempt to increase our average crops to twice the quantity per acre now harvested? This can only be done by augmenting the fertility of wheat fields; and how can this be effected better than to pass grain, roots, and grass, through meat-producing machinery — selling the meat, and adding the manure to the land that needs it?

The different results obtained by feeding corn to hogs and neat cattle in different parts of the United States, are quite curious and instructive. We have before us a letter from Mr. J. E. **Dodge**, of Potosi, Grant county, Wisconsin, who says: "In October last, I selected from my stock two pigs of the same age, and apparently alike thrifty; one, however, weighed 260 lbs., and the other 247 lbs. Immediately after being weighed, they were put in different apartments of the same house, kept dry and warm, and fed with great care forty days, when they were weighed and slaughtered. The heaviest pig was fed with corn meal mixed stiff with cold water; the other with shelled corn, with a plenty of pure water to drink. The one fed with meal consumed 425 lbs., and gained 63 lbs. live weight; the pork weighed, after dressing, 267 lbs. The other ate 308 lbs. of corn, and was found to have gained only 33 lbs. in live weight; his pork weighed 231 lbs. By subtracting the pork weight from the live weight, the amount of offal is ascertained, which in this experiment proved a fraction less than one-fifth of the live weight. If one-fifth be deducted from the amount each pig gained, we then have the true gain in pork produced, which was 6¾ lbs. for every 56 lbs. of corn. The pigs were a cross between the Byefield and Berkshire—the best and most profitable breeds. The corn the yellow dent or Cleveland, a variety held here in great esteem."

We confess the above statements, the truth of which we have no reason to question, surprize us. The pig fed on dry corn gave only a pound of pork for 11½ lbs. of corn. Had this meat been made in Georgia, where corn is now selling at two cents a pound, or at $1.12 a bushel, it would have cost 23 cents a pound! Allowing the manure to have been one-fourth the price of the corn, (it is estimated at two prices,) and still the pork cost 17 cents a pound. The other pig did a little better on meal. His pork cost 8 lbs. 5 oz. of meal per lb., which is too much by half to have pork-making profitable. Mr. **Henry Ellsworth**, former Commissioner of Patents, produced pork at the rate of 100 lbs. of meat to 350 of corn *cooked*; but, about five to one is the relation that grain bears to the meat.

Eight thousand circular letters from the Patent Office have been sent into every county and parish in the Union, besides being published in a number of agricultural journals, containing the following among other questions: "How many pounds of beef will 100 lbs. of corn produce?" Most of the answers come from Ohio and Kentucky, and the quantity stated ranges from 10 to 20 lbs. of beef for 100 of corn; the average is about 16. If any reader of the Farmer has any facts in regard to feeding sheep or cattle, showing the yield of meat for a known quantity of food, we should be happy to receive them for publication. To produce food for man and food for plants in the most economical way, are the points aimed at.

PROF. JOHNSTON AND AMERICAN AGRICULTURE.

The readers of this journal saw in the last number, what an Englishman, who has made the science and art of agriculture his professional study for many years, says and thinks of the farming operations of this country. Although Professor J. has fallen into errors that will add nothing to his reputation in the United States, or among men any where who have any knowledge of our government, a few of which we signalized by italics; yet there is too much truth in his account of our bad husbandry and defective tillage to be altogether agreeable to our self-esteem, or creditable to a republic of independent cultivators and owners of the soil. In representing "*all the farmers of Maine as bankrupt*," and the Legislature of New York as printing a large edition of his lectures and of the Transactions of the State Agricultural Society "*for gratuitous distribution throughout the several States*," he gives the people of England and Scotland a very mistaken idea of both, and exposes an inexcusable ignorance of our government and people. The learned professor may yet make profitable additions to his large stock of knowledge.—Were we writing for a publication to circulate in England, we would notice these errors more at length, and thus disabuse the minds of our readers and give them a correct knowledge of our country; but as the errors are so gross as to be apparent to all Americans, it will be more profitable for us to notice that portion of Prof. J.'s remarks in which we are more directly interested. It is better for us to profit by the facts, than complain at the blunders of our visitor.

When the Prof. says that the wheat-growers of Great Britain have little to fear from American competition, he undoubtedly gives expression to an important truth. Europe is full twenty years ahead of us in agricultural science and schools, and the little kingdom of Denmark sent, according to the official returns, 1,320,571 quarters of wheat to England, in 1849—equal to all that went there in flour and grain from the New World. The cost of sending wheat from Denmark to London is but eleven cents a bushel. For many years the Emperor of Russia has had 4000 acres under cultivation as model and experimental farms, and 40 college buildings filled with some 3000 students of agriculture. We learn from the Russian minister at Washington, and other sources of information, that the noblemen of the empire are taking a deep interest in the advancement of this most important national interest. In this country, our nobility and sovereigns have successfully resisted for 30 years, all attempts to foster the study of rural economy as a branch of knowledge as worthy of schools and colleges as the study of *dead* languages, to learn the *dead* mythology of *dead* heathens, who have slept quietly in their graves for 20 centuries. Their idols are worshipped with ten-fold more zeal and devotion now than they were in the days of Socrates, or of our Saviour. With all their literature, the Greeks and Romans did not advance the art of husbandry one hair's breadth in a thousand years; nor can we do any better so long as we neglect to investigate and obey the natural laws which God has enacted to govern the fruitfulness of the earth. Prof. **Johnston** saw every where in this country unmistakable evidence that its farmers had little reverence for the divine principles of agriculture. So long as we persist in rebellion against the obvious laws of Providence, and heedlessly waste the elements of bread, and meat, and clothing, which we annually dig from the soil, wise men will continue to reprove our folly, and coming generations will certainly reproach us for our stupidity. We can not create the first atom demanded by nature to form a healthy potato, and we know that in twenty-five years there will be fifty millions of human mouths to be fed three times a day, in the United States, and by the close of this century, one hundred millions to be supplied with food and clothing. How few realize truths like these! The ferry across the Atlantic is soon to be so cheap that a million Europeans, from the now rapid increase of the 260 millions on the continent and British islands, is the smallest number we are annually to receive to populate this land of promise. Never was there a time when science, enlarged statesmanship, and a wise system of agriculture were so pressingly needed in America. Had the policy recommended by President **Washington** to Congress been adopted, to foster agriculture as the most important branch of national industry, the country would this day be a thousand millions richer in property, and vastly better off in popular intelligence. To **Washington** as a General, there is going up in the federal metropolis a monument which will cost over a million, and be five hundred feet or more in height; but to Washington the farmer, nothing is done except to permit the once fine estate of Mount Vernon to grow up in briars, bushes, and pines, a harbor for wild beasts. All foreigners reproach us for our national disrespect of the home and the grave of the "Father of his country." What with the ten millions a year expended on the army, the ten millions expended on the navy, and the nearly twenty millions given to politicians, it seems extraordinary that a nation of farmers can not afford the few dollars necessary to make the estate of the great and good Washington an experimental or a model farm.

Including appropriations of public lands for the children, grand-children, and great grand-children of those that served with Gen. Wayne in the Indian wars, and in all the wars since his time, with slight exceptions; grants for railroads; and money voted for the ordinary expenses of the Government; the first session of the present Congress expended $100,000,000. For twenty years the writer has tried to create a public sentiment in favor of appropriating the whole national domain to the sacred cause of popular education. The proceeds should be expended by each State as the New York Legislature was persuaded to apply its share of the U. S. surplus revenue. Although the landed security was defective in some counties, nevertheless the four millions received from the national treasury will do incalculable good after every man who nobly aided in making the sum a part of our common school fund, is no longer among the living. We have urged the appropriation of the public lands, in the manner indicated, on legislators at the capitol of South Carolina, at the capitol of Georgia, at the capitol of Illinois, at the capitol of New York, and at the capitol of the Republic; but it has been like "calling spirits from the vasty deep." Popular education is a most unpopular measure, so far as the wild lands of the United States are involved in the question. The higher education of farmers, so that there might be half as many of this class as of lawyers in Congress and the civil employments of government, has long appeared to us an object of importance.

The first executive message in our history, that contains the word "manure," is the recent one from President Fillmore, which seems something like an acknowledgment that there is such a substance, and that it is worthy of a little consideration. Although the importations of manure (guano) in 1849 reached only 11,750 tons, the trade promises to be twice as large in the current year. About $60,000 worth of this article is sold per annum in the District of Columbia, while there is annually wasted in the same District $100,000 worth of nightsoil. We wanted the trifle of $200 to experiment on several European methods of deodorizing and drying this substance, in order to publish the results in the agricultural part of the Patent Office report; but not a dollar could be had. President-making, not the best plan for preparing and using the food of plants, is the leading idea in Washington. In twenty years from this time a different feeling will exist in Congress and most State Legislatures, in reference to the science of rural economy. The careful study of soils, of cultivated plants, of domestic animals, and rural affairs in general, will some day be as highly esteemed in this country, as the study of Greek and Latin now is. After a pretty thorough investigation of this subject, with advantages for reaching a correct conclusion enjoyed by few, we do not expect that the number employed in impoverishing American soils will diminish in twenty-five years. The improvers of arated land will a little more than double in that length of time; but the number of poor farmers will remain nearly stationary. We ought to have a National Agricultural Society, to bring together and excite a cordial union in the feelings of all agriculturists throughout the empire. The friends of rural improvement measurably throw away their labors by isolated and independent efforts. A more extended organization, operating over the whole Union, can render the cause an invaluable service. This would bring thousands of good men true into line, and many sections which most need waking up, might be reached by the reports and proceedings of this national association. It should be independent of government, except Congress might aid in printing, as the Legislature of New York does for its State Society. Without an efficient system, steadily pursued by those that appreciate its benefits, public opinion can never be brought up to that high standard of skillful farming which such gentlemen as Prof. Johnston expect to witness from our great and peculiar advantages. Instead of being far behind English and Scotch farmers—growing fifteen bushels of wheat where they would harvest thirty—we should excel all civilized nations in the excellence of our improved lands, of our crops, and our domestic animals. To achieve this distinction, we have only to will it. What is our much boasted self-government worth, if we can not use it for *useful* as well as *ornamental* purposes? Washington, the President of the Convention that framed the Constitution, labored to place agriculture on its true basis in reference to government patronage; but, alas, his countrymen have repudiated his wisdom in this matter. There are hundreds who ought to know better, that deny the right of Congress to foster improvements in agriculture in any way whatever. There are still more who admit the right to act, but deny the expediency of our attempting to keep pace with Denmark, Russia, and Prussia, in the art and science of grain-culture. If one having a taste for rural science, should undertake to demonstrate by analysis and by practice, that one kind of mold is really worth ten times more than another for growing wheat, (as is the fact,) it would take him a long *lifetime* to communicate the information to one-half of the wheat-growers in the United States. How could he possibly reach them? They neither see nor care to see any agricultural journal; they know nothing of agricultural societies, their transactions, nor of Patent Office reports. There are over a million of American farmers in this condition. How are they to be reached? Only by cheap papers universally distributed. We have been endeavoring to do our part in this respect. We furnish a paper so cheap that the price can deter none from reading it; and yet we think the richest and the ablest may peruse it with profit. We also endeavor to make it attractive and interesting to the young; and we rejoice at the evidence we are constantly receiving that we are not laboring in vain. There are those who are steadily laboring to improve themselves and their neighbors, by spreading agricultural information, thus elevating our system of agriculture; and though they may be unknown to fame, they are no less the benefactors of their country.

BEES.—No. 6.

Gilmore's Plan.—This method consists in placing the bees in one common tenement, and feeding them with a compound, or syrup, said to cost only about three cents a pound, which it is contended the bees elaborate or change into pure honey, even superior to that gathered from nature's store-house! It is also said by the pretended discoverer of this system, that three or four swarms joined by him in common, produced over *twelve hundred* pounds of the purest surplus honey in one season, worth two shillings per pound!

Now, it is no new thing to show that bees will store up large quantities of any thing of the nature of honey, when fed to them; but it is a new thing in the history of this insect, to show that what is received into the honey vesicles undergoes a change therein, and when deposited in the cells is a different compound or substance from that originally taken by or fed to them. The gatherings of the honey bee undergo no change whatever while passing from the flowers of the field to the cells of the comb. If the honey has any impurities or unpleasant flavor in the flowers, it has the same qualities after being stored by the bees — not a whit the better or worse for the manner of transit. This is shown by the fact that the honey from buckwheat blossoms is ever dark colored and of unpleasant flavor, while that from white clover is transparent and of excellent flavor.

Again; you may feed bees whatever you please, the article fed to them is precisely the same when stored in their cells as it was before being taken by them. Let any one try the experiment of feeding *syrup of sugar*, which is the only substance that they will eat except honey, and let him examine the cells when filled, and if he finds anything there save the identical syrup of sugar, with all its original flavor, I will admit that I know nothing about the matter.

There are but *two* substances that can possibly be fed to bees to any great extent, viz: *sugar* made into syrup, and *honey*. Mr. Gilmore must use the one or the other of these articles to form his compound. Sugar is not suitable, since it would not be saleable in the combs. Honey, then, must be the substance used. The honey that is imported from Cuba in casks, is worth from fifty-five to sixty cents per gallon, or from four to five cents per pound. This honey-bees will store up greedily: and it is what Mr. G. uses, without doubt. Some article is probably mixed with it to partially destroy its identity, and which perhaps reduces the cost to the sum named by Mr. G.

The deception in this business mainly lies in asserting that the article fed to the bees is changed to the purest and best honey. This I contend is false, and with this the whole theory tumbles down; for, who would desire to sell or to purchase so spurious an article as West India honey in the form of northern honey-comb? I also deny that as much honey as 1200 pounds was ever stored up by three or four families of bees in *one* season, as *surplus* honey, even when fed with as much honey as they could carry away.

To be as brief as possible, this system is one of the greatest humbugs, in apiarian science, of the age. Last spring a gentleman wrote me from Boston, enclosing an advertisement of one of Gilmore's agents at Cambridge, relative to this system, and requested my opinion thereon. I replied, that in the advertisement of seven lines there were *six* falsehoods, and I named them. I also authorized him to say to said agent, who was a friend of his, that if he would prove before any three disinterested gentlemen in Boston, that the compound was any other substance in the main than West India honey, I would forfeit *one hundred dollars*. He declined the proposition. Some few weeks since, I had occasion to write to the gentleman who solicited my opinion as above, and I asked him how his friend had succeeded in the sale of Gilmore's system, and what the result of it was with purchasers. "It has proved a humbug," said he, "about here. It appears to be so unreasonable to suppose that any substance can be found to feed to bees, that will produce as good or better honey than the flowers of the field — that it is absurd upon the face of it."

In Mr. Gilmore's pamphlet of the description of his plan, he gives the names of *thirty-three* individuals who come forward and attest by certificate that they have examined his system, tested the honey made from the syrup, are knowing to the fact of the large storage of honey, (1200 pounds by three swarms,) and are fully satisfied of the truth of the whole statement as given by Mr. G. On another page he gives the names of *thirty-two* persons who he says has purchased Rights, and among which there is not a single one of the men *(men of straw)* who signed the said certificate! Now, if these gentlemen actually knew all that they have certified to, if any such men exist, they would have pledged the coats upon their backs to secure a Right, if they could not have done it in any other way.

If my remarks upon this system are incorrect, I shall be happy to make any retraction that the case requires, on having it shown to me by gentlemen who have purchased Rights of Mr. G., that I am wrong; till then I shall affirm that all who purchase Rights, "pay very dear for their whistle." I make these remarks solely on the ground of the public good, in a general course of remarks touching the culture of the bee, and I feel bound to speak out freely, though my sentiments may conflict with individual interests.

T. B. Miner,
Author of the American Bee-Keeper's Manual.

Clinton, Oneida Co., N. Y., Jan'y, 1851.

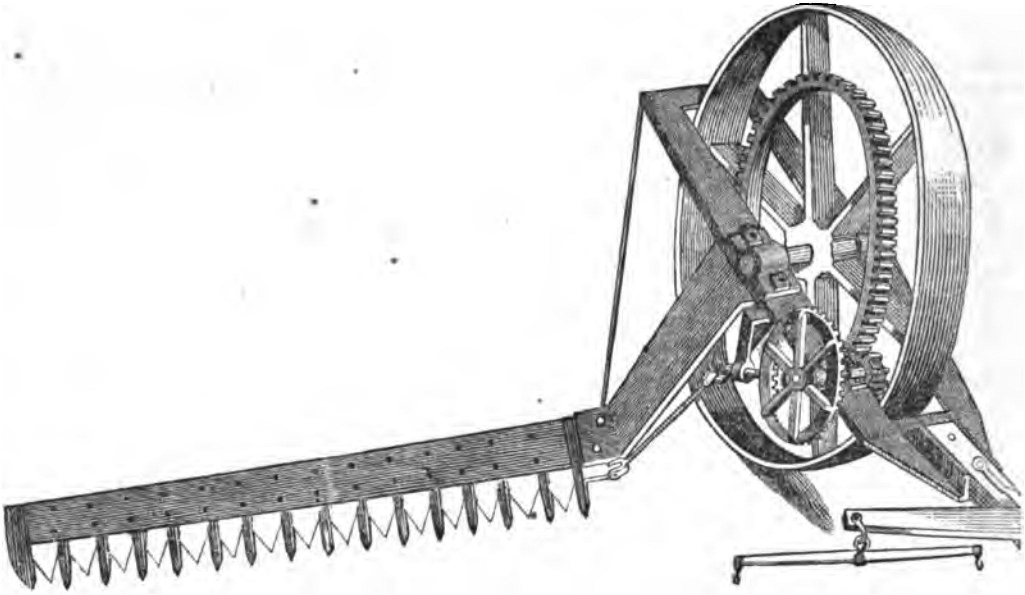
CURING HAMS

One says, put in a little molasses; another says, put in some sugar; and another says, if you want your pork to keep good, sprinkle a little pepper between each laying.

Now all this is unnecessary. Let any man take good salt, sprinkle the bottom of the barrel well with it, and rub the sides of the barrel, that the hams may not lie against the fresh wood; then put down your hams, salting them well; make brine enough to cover, mixing in three ounces of saltpetre to a barrel; let them lie in the pickle four weeks, and then take them out and soak them three days; then hang them up and smoke them, but not to death; then pack them with sweet hay, in barrels. In this way they will keep all summer, and be sweeter and nicer in August than any of your sugar or molasses cured hams will that I have ever tasted. Try it for yourselves. J. B. C.—*Groton, N. Y., Jan.*, 1851.

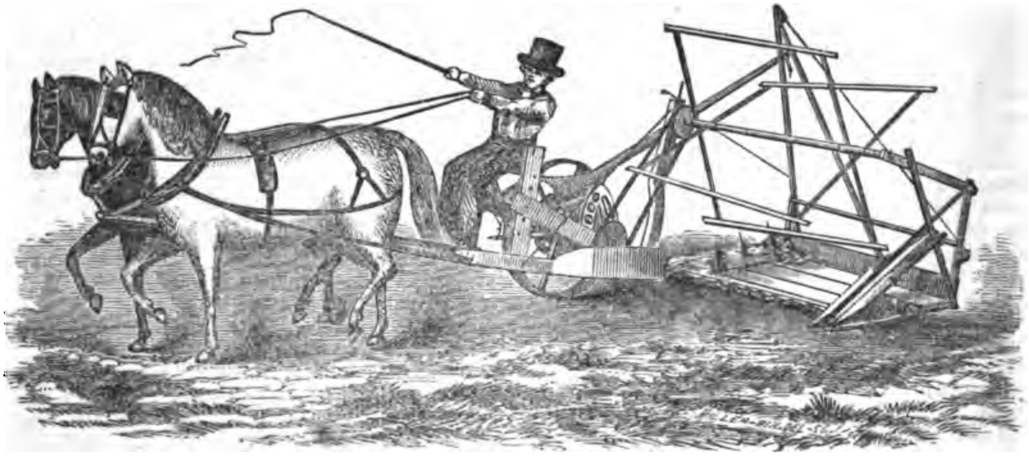
* * *

Two or three spoonfuls of tar or lard put into the mouths of cattle, hoven from eating clover, will relieve.



KETCHUM'S MOWING MACHINE.

The above engraving is a representation of Ketchum's Mowing Machine. It is not yet generally known; but we believe where used, has given good satisfaction. We saw it at the last State Fair, and have seen it in operation, and have heard but one opinion in regard to it. Last season we received several letters, inquiring where a good mowing machine could be obtained. We took some pains to ascertain, and published a short notice in the Farmer. On seeing this notice, our friend Geo. Sheffer, of Wheatland, immediately procured one. He made some slight improvements by strengthening some weak points, which we believe has been adopted by the manufacturer; and Mr. S. informed us last summer, that he did all his own mowing, and nothing could tempt him to part with it. We refer all desirous of further information, to Mr. S., who no doubt will be pleased to give all necessary information.



DENSMORE'S SELF-RAKING REAPER.

The above cut represents a reaping machine invented by Mr. Byron Densmore, of Brockport, in this county, and put into operation the last harvest. We had an opportunity of examining this machine a few days since. It is a difficult matter to judge of the real merits of such implements without seeing them in operation; but we see no reason why it may not work well—at all events it is worthy of examination. Those who used it in the last harvest, and those who saw it in operation, speak of it in the highest terms, as both cutting and raking the grain in the most perfect manner. The rake that discharges the grain from the machine, vibrates crosswise of the platform, which is double, and the teeth extend up through grooves in the upper platform. These teeth turn down and run back under the grain, and then raise up and sweep it off, with a quick motion, at the right side of the machine. If Mr. D. has succeeded in making the reaping machine a perfect self-raker, which is yet to be fully decided, he has certainly made a most important improvement. See advertisement in this paper.

Inquiries and Answers.

THE WIRE-WORM.

Messrs. Editors:—I saw in your paper a request to know of some plan for destroying or obstructing the wire-worm, and I, too, would be glad to know how to destroy them; for they have done me, and others in this vicinity, a deal of damage. I have been watching them, and have been trying some experiments which may perhaps be of some little value.

A few years ago I was preparing two fields for wheat, and when I began to cross-plow, I found my fallow full of wire-worms. I cast myself about to see what I had better do, for I thought that if I put in seed they would destroy it. Some of my neighbors said if I would let it lay as long as I could before sowing, the worms would disappear in a measure. I did so, and found they had diminished by the time I finished my plowing. My other fallow, which I supposed to be full, I was at a loss what to do with. I got a gang plow, and put it in without crossing, thinking that by leaving the sod under for the worms, they would leave the grain; *but they nearly spoiled both fields.*

I had a piece of oats on new ground, which I purposed to put to wheat after the oats; but the worms had injured the oats very much, and I told my folks that I should have to give up that piece anyway, but that I would put the plow in and see how it looked. This was in the fore part of August. Soon after, I began to look for worms, and I found them pretty thick, mostly at the bottom of the sod that had been turned under; and there were not only worms, but skins of worms, which excited my curiosity. On inspecting closely, I found the skin slipping off of some; and when the skin was off, they contracted in length, and there were legs and wings, and in a short time time they were perfect bugs of a dark bronzed color, which grew darker and at length became black. "Well," said I, "there are eternal lots of these fellows." These little black bugs, of about half an inch in length, are very common, but I did not know before that they were produced by or from the worms; but so it is.

The next year I was going to put in a piece to wheat, which I knew was infested with them, and when dragging the ground, I would stop and sit down on the drag to rest and look for bugs, which were to be seen quite plenty, looking for a hiding place after being disturbed by harrowing. I had noticed through the summer, while paying close attention to them, anxious to find some way to destroy them, that they congregated together, and would get under whatever they could, like sods, flat stones, stocks of hay, barley, wheat, &c. A thought struck me—I would try to burn them by driving them under bunches of straw and setting fire to it. So, after dragging my fallow, I took a chain and drew across the field, making lines seven paces apart, and set the boys drawing straw and pitching a fork full every few feet on those lines. I then took two stone-boats lashed together, put a boy on them, and drew them along on the mellow ground, between the rows of straw, for the purpose of disturbing the bugs and smoothing the ground so that there would be but little chance for them to hide. I could watch behind the team, and see them, all dirt and dust, running to and fro, until finding the straw, they would remain there. After about a week it looked likely to rain, so we set fire to the straw. After burning, I looked in the ashes, and found in a spot not larger than my hand, some forty or fifty, making quite a handful. I then went to the next pile, about three paces off, and there were as many more of the dead rascals.—"Good," said I, "we have used up a good lot of them; but probably there are too many left yet." And so we found it; for they ate considerable of the wheat; but still, not enough to injure it so much but I got a first rate crop on the same piece where they completely destroyed the two last crops.

This fall we have turned in a very heavy crop of rowen clover, and sowed the same piece, and they have not injured it; but I think it is on account of the clover, which furnishes them with food in part. I have another field adjoining, which has lain to pasture three years, which we plowed five times on account of the thistles; and some say that will destroy the worms; but they have eaten that piece badly. I would like to plant this piece to corn for the next crop; and how am I to prevent the worms from destroying the corn? I will tell you how I think of doing: it is, to stock to clover, and to plaster the clover the spring before planting, and get as much on the ground as possible, and not plant till rather late. Perhaps the worms will feed on the clover, and leave the corn.

Some have had good luck in turning in green sward for corn; but the next crop catches it. If I summer-fallow after the corn, I will try the straw again. But if I put in barley after corn, then what? If straw should be put on and burned early in the spring, before putting in the barley, it might have a good effect, for the bugs are early at work in spring, and appear to live on vegetation on the ground, while their larvæ feed upon the roots.

One of my neighbors has suffered very much by them, and wonders why he can not find them when he is plowing, and will take a spade and dig to see where they are, but they are gone. In a few weeks, or after the barley is nicely up and growing, the worms commence devouring it root and branch. Then you may dig lots of them with your fingers, and many of them not larger than a cotton thread. As near as I can ascertain, by pulling the bugs in pieces, they lay their nits fall and spring. I have seen several articles on the subject of wire-worms, but none that satisfies me. S. R.—*Mendon, N. Y.*

PIGEON WEED.

Messrs. Editors:—In answer to the inquiry of R. W. B., on Pigeon grass, I would give my experience. Some years since, I had a field of four acres, which had become so well seeded with pigeon grass that I got only about h[illegible] a crop of oats. The next year I plowed it soon after planting my corn; in about two weeks I harvested it; plowed again about the first of July, and harrowed as before. The last week in August I plowed again, and soon after sowed it to wheat, one bushel to the acre. I had one hundred and twenty-six bushels of good wheat. I have not been troubled with pigeon grass on that field since. I had another small field in like circumstances, which I sowed to oats and seeded it, and mowed it four years, and then plowed it, and the pigeon grass was as thick as before, which led me to believe that it is one of those kinds of seeds that will not grow unless near the surface, and exposed to heat and light. E. F.—*Wayne Co., N. Y., Dec.,* 1850.

WILD MUSTARD.

In the December number of the Farmer, page 278, a correspondent inquires in regard to Wild Mustard. I can answer in a word, that it is one of the worst enemies to summer grains within my knowledge. I have lost the use of valuable land, (except for grass or hoed crops,) that had unfortunately become seeded with it. On mowing grounds, and grass lands generally, it does no great harm. But in summer wheat, in oats and barley, it is, if neglected, an absolute pest. To destroy it, a gang of hands must go through a grain field and pull up every stalk on which a yellow blossom appears. By taking each a given width so as to overlook or neglect no space, and going over the whole field, it may be almost entirely eradicated. And this should be done every season, if a single yellow blossom appears. The seed is so fine, and of course so numerous from a single stalk, that to neglect a cultivated field on which it was visible, for one or two seasons, would lead to ruinous results. Care should be taken, in passing through the grain, not to trample it down unnecessarily, and but little injury will result from this source. Whenever it appears in winter wheat, as it occasionally does, the same measures should be taken to destroy it. I am confident, many farmers do not justly appreciate its true character, from the manner in which it is taking quiet possession of their fields. D.

SNAPDRAGON.

Though this plant is cultivated for the beauty of its flowers and foliage, it becomes very troublesome when it is permitted to extend itself into pastures and meadows. Botanists now describe it under the name of *Linaria vulgaris,* or common False Flax. A few years ago I saw instances of its having covered the fields and nearly eradicated all kinds of grass, on the west side of the Hudson, north of the Highlands. I have also seen it spread from its location in the garden into the adjoining fields with much rapidity.

Your correspondent inquires *how it may be eradicated.* As I have never seen any difficulty in restraining its extension in the garden, I have ever believed it is easily subdued. I have near by me a bed of it in a garden, which has so far been confined to its designed situation, with no uncommon effort. Though it is an annual plant, it produces a multitude of seeds. These doubtless lie buried often in the earth for years, like many other seeds, to germinate when they are favorably exposed for this purpose. While the hoe would easily destroy all the present crop, the operation must be repeated from year to year, till the work is accomplished. C. D.

Messrs. Editors :—I am glad one of your "Faithful Readers" feels anxious to get rid of his snapdragon. It is one of the worst weeds that grow. Its smell is so offensive that cattle will not eat the grass that grows with it, and *one* of the most difficult to destroy ; and yet I have frequently seen it cultivated for the sake of its beautiful flowers. I was once riding by such a flower garden; and stopped and told the gentleman that I thought he was cultivating a very troublesome weed for flowers. He just asked me how much I charged for the information ? I told him he was welcome to it, and rode on.

I have known a great many experiments tried to kill it, but all failed where there was much of it. Where it is in small spots, *salt,* applied plentifuly so as to prevent it from growing for two years, will destroy it. My father had a lot of it plowed (I think) nine times in one season, and it had the desired effect for that season, but the next it came up as neat and pretty as ever, and he gave it up as an unconquerable foe. It did not grow much the next season until quite late, and probably came from the seed. If he had continued the plowing another season, it might have destroyed it. If I had much of it on my farm, I would commence an exterminating war against it with the plow, and would prosecute it to the death. Stephen Hull.—*Clyde, N. Y., Dec.,* 1850.

Eds. Farmer :—I have noticed in your invaluable journal (of which, by the way, I am a life subscriber,) an article soliciting a knowledge of the means to exterminate Snapdragon. Before it spreads to much extent, I have succeeded in destroying it with fish brine, but when it embodies a large portion of the fields, the process of frequent plowing would perhaps be more easy and equally as effectual. A. M. —*Claverack, N. Y., Dec.,* 1850.

SEED POTATOES.

In the December number of the Genesee Farmer, page 277, the question is asked, "Whether it is more advantageous to plant small potatoes than large ones ?"

From my earliest youth I have been taught the importance of selecting the largest and best potatoes to be used for seed. My practice has been occasionally to put one such in a hill ; but, generally, to cut them into two or three pieces and to put three pieces into each hill. In the spring of 1849, owing to the scarcity and high price of potatoes, I was induced to plant, as an experiment, some small *Mercers* in the garden, on a square that was highly manured. The yield was great, and the potatoes first rate as to size. Being much disappointed, and stating the fact to a friend, he gave an unqualified opinion, that the favorable result was owing to the richness of the soil. The past season I planted several bushels of the largest and best *Mercers* I could purchase in the city. They were generally cut into three pieces each. But the supply not being sufficient, I planted three bushels of small ones, such as had been laid aside as too small for table use. Of these, three were put into each hill, and were planted along side the large ones. The quality of the ground, the time of planting, and the tillage, were in all respects the same. When the shoots from the small seed first appeared, and for a short time after, I thought them rather more slender than those from the large ones, but soon there was no perceptible difference. At harvesting, the size, quality and product from the small seed was equal in all respects to the large ones. But the ground on which these were planted was rich, having been highly manured. To complete the experiment, however, I planted at the same time half an acre of ground of fair quality that had been tilled before, but not manured. Half the piece was planted with the small seed, and half with the largest and best quality. These were cut into two or three pieces each. Previous to the first hoeing, a handful of leached ashes was thrown on each hill. At harvesting, the potatoes were large and fine ; and those from the small seed were equal in size and product to the others. The richness of the ground, therefore, in the first parcel, was not the cause of producing as large potatoes from the small seed as from the large. In the latter case, ground comparatively poor, produced the same results. If a bushel of small potatoes, that would not sell for one-fourth the price of large ones, should prove as good for planting as the large, it would be well to know the fact. I have made these suggestions to direct the attention of farmers to the subject. E.

DAIRY STOCK.

Messrs. Editors:—Being very desirous of importing the best dairy stock, I have taken the liberty to make a few inquiries through your truly valuable Farmer. I have carried on a dairy in Ayrshire, Scotland, for twenty-five years, and always considered the Ayreshire cow the best that could be obtained—milking qualities considered. The Short Horns were considered the best for fattening. Our best Ayreshire cows yielded thirty-six quarts per day, on pasture alone, and our poorest, twenty-four quarts per day during June and July. Now I have been a reader of the Farmer for the last two years, and I have noticed much has been said in favor of Short Horns as milkers, and nothing, comparatively, of the Ayreshires. Is it true that the Short Horns are better milkers, in the United States, than the Ayreshires? In a recent visit to Toronto, Upper Canada, I found that the Ayreshires were quite favorites with many of the first farmers, for milkers; and by some, the Short Horns were preferred, in reference to both milking and fattening qualities. But for the dairy alone, which do you consider the best of our imported breeds, and where can they be obtained? J. Brodie.—*Belleville, N. Y.. Dec.*, 1850.

WIRE FENCE.

Messrs. Editors:—I would like to learn, through the columns of the Genesee Farmer, the best and cheapest manner of making Wire fence. Many of your readers and subscribers are no doubt well acquainted with the cost and manner of construction, &c. J. J. Marlett.—*Hoffman's Ferry*, 1850.

GREAT YIELD OF SQUASHES.

The past summer I raised twenty-five crook-neck bell squashes from one seed. By the help of my neighbors, we put them, attached to the vine, into a wagon, carried them to the County Fair, and drew a premium. They weighed 400 pounds separate from the vine. I measured the vine, with all its branches, and it measured 32 rods and 4 feet. Another sort that were green outside, and pumpkin-shaped, produced six large squashes, and the vines measured 40 rods. No extra care was taken with them. They grew among small trees in my nursery, where they had plenty of room. Amery Willson.—*Marcellus, Dec.*, 1850.

We received a letter from Mr. W., which was evidently intended for some other person. It was returned, and in correcting the blunder, which was made by "putting the wrong inscription on two letters sent at the same time," Mr. W. tells the following story, which is too good to be lost:—"It reminded me of a divine who was called upon for advice by a neighboring society. He wrote a letter of advice to them, and at the same time was called upon by a man on his farm, to know what he should do with some unruly cattle of his. He wrote to the servant, folded the letter, and did as I did, put the wrong inscription on each one, and when the church members opened the letter, it read thus:—'Chain up the big black bull, and that will restore peace and tranquility.' And they chained the bull, and that ended the difficulty in the church."

COMMON SALT AS A FERTILIZER.

As I noticed a remark, in a late number of the Farmer, on this subject, I wish to offer the following remarks:

For the superior growth of vegetables, various substances are necessary. It is not enough that most of vegetables have carbon, oxygen, hydrogen and nitrogen—the four grand constituents in their composition. I know that these are often called *essential*, and that some others are spoken of as accidental, or at least, not necessary to the perfection of vegetable matter. It seems to me that this is a loose mode of expression, and that the implied notion needs qualification.

Thus chemistry shows that sulphur and phosphorus are essential to the existence of the *fibrine* and *albumen* of animals, the former being the substance of *muscle*, and the latter of *nerve*. Liebig, and others, have proved that vegetable fibrine and albumen have the same composition as the animal; and hence it is the necessary inference, that animals obtain these substances, ready formed, from their food, either animal or vegetable. The vegetable world sustains a direct importance to the animal, in the production of these great vegetable substances, which become by the process of digestion and nutrition and assimilation, the most necessary of animal compounds. The same remark is true of *casein*, which is an important portion of milk, and abounds in cheese.

In the grasses and grains, the essential food of man and numerous animals, there exist silex, phosphates of iron and lime, &c., potash, soda, lime, magnesia, sometimes a little common salt, and some others. These substances are necessary for the plants themselves, or, they are constituents of the plants and of their fruits.

Now, these are obtained chiefly from the soil, and if the soil does not possess them, they are to be added in the supply of manures. *Wheat*, it is well known, must obtain from the earth a certain amount of phosphate of lime for its highest state of excellence.

It is to be expected that these substances will exist in most soils. Hence the rocks, by whose disintegration soils have been formed, are found to contain them, in their natural state. If they have been removed by any means from the soil, the farmer must supply the adequate quantity of them. This is a necessary, though small part of scientific agriculture. Besides the common substances and fertilizers in soils, some rare ones have seemed to be valuable, as sulphate of iron or copperas, common salt or chloride of sodium, sulphate of lime or gypsum, &c.

Common salt is found in plants of the ocean, or seaweeds, while potash exists in land plants. The latter we know to be a great fertilizer, and important in plants of the land, but not in those of the ocean. Hence we might expect to find common salt of little consequence to land vegetables, but of great to sea-plants. Hence, too, it would be probable that a certain proportion of common salt would be found in soils, if it was essential to the constitution of land vegetables, as is silex, potash, phosphate of iron, and the earthy phosphates and carbonates.

Many years since Elkana Watson, Esq., stated to the Berkshire Agricultural Society, at its great anniversary Show and Fair, the favorable results attained by some agriculturists in Pennsylvania, from the use of common salt as a fertilizer. Other experiments have since been tried with some success. Th analyses of vegetables, by Prof. Emmons, in Vol. II. of his State Agricultural Report, show the existence of the elements of common salt in some soils and in some parts of the vegetables. The quantity, however is small, sometimes none, sometimes a mere trace of the chlorine.

On the whole, the probable conclusion is that common salt is useful as a fertilizer—that only a small quantity is taken up by vegetables, and only a small proportion of it is necessary or profitable.—C. D.

FARM BARN AND STABLE.

As we have, during the last month, received several inquiries for a plan for a barn and stable combined, one of our correspondents particularly mentioning that he wished for a plan suitable for sloping ground, we copy the following designs and description from *Downing's Country Houses.* The plan is perhaps on too extensive a scale to suit most farmers, but can of course be varied. No one can carefully study the plans without getting some valuable hints, whether he ever builds after it or not.

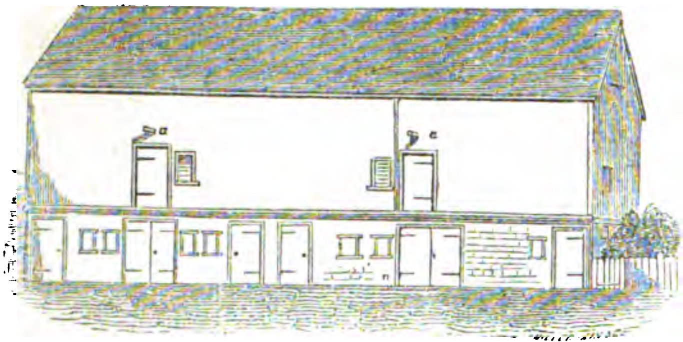


Fig. 1. ELEVATION OF A BASEMENT BARN.

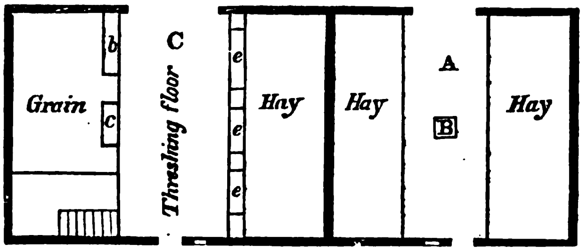


Fig. 2. PLAN OF THE MAIN FLOOR

"As one of the best and most complete examples of this kind of barn and stable within our observation, we may instance that of our neighbor, Mr. William Sayer, 8 miles from Newburgh Mr. Sayer's farm lies in a grazing district, and, of course, his outbuildings are different from those required in a strictly grain-growing district. We have never seen, however, in any part of the country, a single farm building in which economy of space, excellence of arrangement, and nicety of construction were more completely combined than in this barn. We may add, that the plan is entirely Mr. S.'s and for a farm of this kind, is not easily improved.

The elevation, Fig. 1, shows the stable or basement side, with both stories. The posts are 16 feet long, from the basement walls to the eaves. The opposite side, one story high, shows two pairs double doors for driving in loads of hay and grain. The whole building is 30 by 72 feet, outside—30 feet square being a hay barn, under which is the stable for cows, and the remaining 43 feet being a grain and hay barn, with horse stalls, carriage-house, etc., below.—At *a a* are shown tackle beams, with hooks, to which a block can be attached, for lowering or drawing anything up to the main floor.

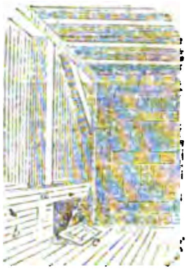


Fig. 3. THRESHING FLOOR.

In Fig. 2, which is the plan of the barn floor, A is the main floor, 12 feet wide, with a hay-mow on each side. At B is a hay-well, or hole in the floor, with a curb round it, through which the hay is thrown into the feeding passage in the cow stable below. This curb is removed, and a trap door put in its place in summer.

C is the threshing floor, 14 feet wide, with a hay-mow on one side, and grain on the other. On one side of this floor is a space, *c*, through which straw is thrown into the straw room, and another, *b*, through which roots are thrown into the root cellar, both being in the basement; while on the other side are openings, *e*, *e*, through which hay is placed in the racks of the horses, in the stable beneath.

Fig. 3, which is a view of the mow on one side of the threshing floor, will show how cleverly these openings are managed, in order to occupy no space wanted for other uses. In this, *a* is the side of the mow, boarded up about 3½ feet, in which are doors, *b*, that shut out all dust, etc. These doors are hinged on the lower side, and when thrown down, or opened, *c*, give ample space for filling the racks below in the easiest manner.

Let us now examine the basement or stable story of this barn, fig. 4. The first feature that demands our attention is the cow-stable, occupying about 30 feet square, being that portion on the left hand of the plan, fig. 4.—Here is a large "feeding passage," 11 feet wide, including the mangers, *a*, *a*, on a level with the floor.* This passage is supplied with hay, it will be remembered, through the hole, B, in the ceiling, (which is in the floor of the barn above.) This well-hole acts also as a ventilator, whenever one is necessary, for the whole cow stable.

The cow stable accommodates 18 cows, and the manner of placing the cows in the stalls is both original and excellent. The stalls measure 3 feet 2 inches from center to center, (a width scarcely enough, in our judgment, but which Mr. S. declares, from long experience, to be amply sufficient in this mode.) These stalls are formed of a series of light *gates*, or rather each side of the stall is a single gate, swinging—not upon hinges likely to be broken—but upon a wooden pivot, made on the upper and lower end of the frame post at one end, 2, of the gate. Supposing the cows entering the door *b*, fig. 4, to be stalled for the night—the gates being all swung open (as the three first are represented,) the first cow enters—the gate shuts behind her, and thus forms her stall—then another, and the gate is shut, and another, until all the gates are closed, and the cows stalled for the night, as represented on the other side, *c*. These gates are made of oak, framed so as to be light and strong; and as the pivot post, at the end on which the gate swings, rests in a hole or socket at the bottom, by raising it a couple of inches the gate can be unshipped and taken out in a moment. In this way a double stall can readily be made for a cow about to calve.

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*This feeding passage (including the mangers) has a mortar floor made of lime and sand, over small stones, perfectly hard and smooth, so that no hay seed is lost, while the whole can be kept as clean as a parlor—as indeed it is, under Mr. Sayer's excellent management.

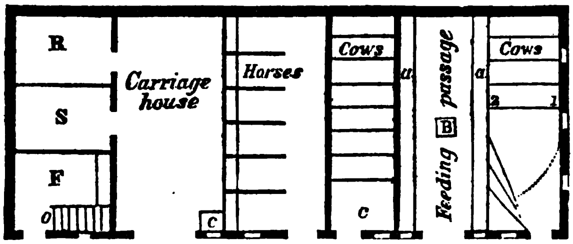


Fig. 4. PLAN OF THE BASEMENT FLOOR.

Next, on the right, see fig. 4, is the stable, 14 feet wide, with stalls (5 feet wide) for six horses. To the left of this is the carriage house also, 14 feet wide. At the side of the door, on entering this apartment, is the pump, *c*, a large cistern, which takes all the water from this side of the roof, being built under the floor here. There is a spout running through the wall and another through the stable, to convey water both into the cattle yard and the stables.

The space of 14 feet wide, to the right of the carriage-house, is occupied by a small root cellar, R; a place for straw used for litter, S; and a spare stall, F, for the occasional use of a pair of horses or oxen. Here, also, is a broad flight of stairs, *o*, which ascends to a store room for grain, etc., on the barn floor above.

WINTERING STOCK.

MESSRS. EDITORS:—I observe that some of my neighbors let their cattle run in pastures late in the fall, in snow and hail storms, endeavoring to get a scanty subsistence from the half frozen ground. Now we think there is neither kindness nor economy in such treatment of our domestic animals. They must, of course, suffer more or less from exposure to the cold rains, and rigorous nights of this season of the year, even without snow. The drizzling storm penetrates the hair, or the fleece, to the skin, chills their limbs and retards the circulation of the "blood, which is the life," whilst the feed, frost bitten and withered, its juicy sweetness gone, is scarcely worth picking.

The opinion of the cattle may be gathered, from their wandering wistfully about the fields, or gathering in the vicinity of the barn, turning up manure heaps for the few straws they can pick out of them, and by their lowing, plaintively prefering their requests for better food and shelter. The farmer who pursues this plan of late pasturing, without any feeding, may save a few stalks and a little hay, but loses more, I imagine, in the condition of his stock. When cattle find so little nourishment in the frost-bitten grass, that they turn eagerly to dry hay, or even straw, have we not a right to conclude that it is high time to commence feeding them?

Nor can a farmer be guilty of more thriftless waste and cruelty, than, after commencing to fodder his stock, to scatter his hay or straw about the barn yard and leave them to stand and shiver in the bleak winds and storms of winter. Cattle appreciate kind care and good shelter, and thrive under them, more than ever entered into the dreams of some men. Their increased flesh, smooth, glossy skin, and saleableness next spring, if desired, would amply compensate for the trouble and expense of warm sheds and stall-feeding. In addition to this, the hay saved that was formerly trodden under foot, and the diminished quantity consumed, it is believed, would pay the cost of all the lumber required to erect comfortable shelter for them, perhaps in a single winter, in the case of large herds. Every body knows, or ought to know, that animals in good condition, and warmly housed, not only thrive, but thrive on two-thirds, perhaps less, the amount of food that is otherwise demanded. I know this is an old story, Messrs. Editors, but a "continual dropping will wear even stones."

I have in view, at this moment, two farmers. One of them has a select herd, which, at this season, he shuts up in convenient stalls every afternoon at about 3 o'clock, fastening each animal to a post with a "cattle-tie" and sliding ring, which is far safer and more comfortable than the stanchell, feeding them in mangers, and letting them out, for water and exercise, in the morning, say at 9 or 10 o'clock. His cattle are always in condition, come out fine in the spring, and command a ready sale; while the saving of hay, he has been heard to say, is nearly one half. The other leaves his animals to shift for themselves in a storm of sleet, or gale of wind, protecting themselves, as many as can, and as well as they may, under the lee of the barn yard fence. He feeds them abundantly, but scatters the hay on the ground. A good part of it is destroyed, and what is consumed is not sufficient to counterbalance the piercing cold. Consequently, when spring opens, his cattle are poor, rough and gaunt, and likely spend half the summer before they get over their hard fare. Nobody, of course, cares to buy such cattle. D.—*Gilbertville, N. Y.*, 1851.

REMEDY FOR VEGETABLE POISONS.—As almost every farmer is more or less troubled with poison ivy, sumach, parsnip and the like, from which I have suffered very much myself, and after trying a great variety of remedies, have found that a poultice made of buckwheat flour and butter milk, with a piece of blue vitriol the size of a pea, pulverized and dissolved, added to the mixture, has had the happy effect of removing the trouble, and effecting a cure in a short time. Some of your numerous patrons may find this receipt worth ten times the cost of a yearly subscription of the Farmer. E. S. FOX.—*Athens, N. Y.*, 1851.

IF you mean to be happy when you are old, be temperate and industrious when you are young.

PARASITIC FUNGI OF THE FARM.—No. 2.

FIGURES 4 and 5, in the January number of this journal, represent the most common variety of mildew, the botanical name of which is *Puccinia Graminis.* The minute fungus that attacks the joints of wheat, is called *diapazea,* and not *diapaza,* as printed in our last. One of the most common kinds of mildew in this country is the black fungus, which gives a dark sooty color to whole wheat fields, towards harvest. It is said by those who have made this class of plants a particular study, that this fungus never attacks sound, healthy plants. It has no popular name; it is called by botanists, *Cladosporium Herbarum.* Fig. 6 shows it to be quite unlike common mildew; and it grows on old leather as readily as on wheat. Its spores (seeds) may be seen in fig. 6, in their cases. The common appearance of straw affected by this parasite, is shown in fig. 7. Whatever preserves the health of wheat, is a preventive of this malady.

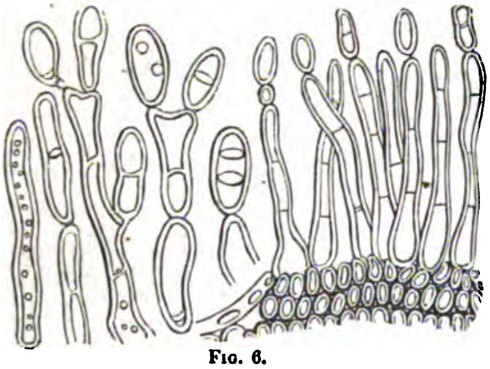


FIG. 6.

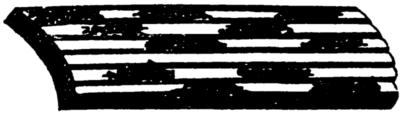


FIG. 7.

We now come to fungi called *Uredines,* plural of *uredo,* and derived from the Latin *uro,* to burn.—There are several varieties of this fungus; the most common are *uredo rubigo,* (fig. 8,) or red rust, *uredo segetum,* and *uredo fetida,* (fig. 9,) or fetid smut. The two last take the place of seeds in the heads of wheat. Maize or Indian corn is subject to attacks from these parasites, as well as barley and oats. "Rust," from its resemblance to the red oxide of iron, has often been attributed to an excess of that mineral in the soil. In England it is variously denominated "*red robin,*" "*red-rag,*" and "*red-gum.*" Damp, warm weather favors the growth of this fungus; and its spores multiply with astonishing rapidity. Fig. 8 represents the spores of red rust as they appear under a microscope of great power. The mycelium on which these spores grow, finds its matrix in the tissues of the plant. If the cuticle or outer covering of its stem is well filled with flint, (silica,) it serves to protect the plant, in a good degree, from being "struck with rust." One sometimes meets with wheat and rye straw as hard nearly as glass, and literally cased in a vitrious coat of mail. No uredo can flourish in so sterile a soil. To produce a bright straw to wheat, see that the ground is not too wet, nor full of grass or weeds; till thoroughly, and use lime, salt, or ashes freely, at the time of seeding, or in the spring. Potash, soda, and lime, operate to increase the solubility of fine siliceous sand, of which the ash of wheat straw should contain about 68 per cent. Clean culture, a reasonably dry soil, and a plenty of alkalies in it, are the best preventives of rust.

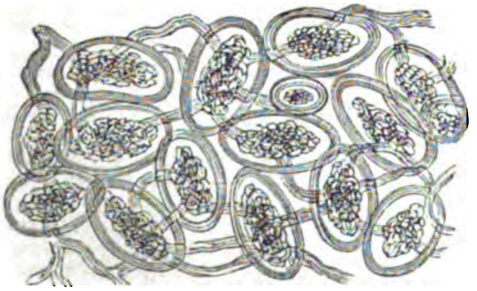


FIG. 8

There are two common varieties of "smut." One is the *uredo segetum,* and the other *uredo fetida,* (fig. 9.) The spores of both are found in the covering of seeds, and seem to be grown at the expense of elements designed by nature to form starch and gluten, if the parasite did not attack the cereal. The seeds of smut (*uredo segetum,*) are found, by the measurement of a micrometer, to be only the two thousandth part of an inch in diameter. Although very undesirable in flour, this uredo is less offensive than the fetid variety, which is more oily, and has the appearance shown in fig. 9, under a good microscope. Its spores are much larger than those last named, being the six hundredth part of an inch. Most grasses are subject to this parasite, which destroys their seeds, as all observers of natural phenomena have seen wheat aborted by this malady.

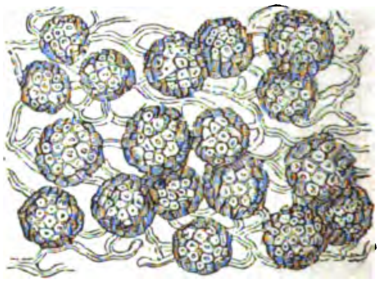


FIG. 9.

Moses threatened the disobedient Israelites with mildew, and the Romans had their false god *Rubigo,* whom they thought to propitiate for the preservation of their grain from the disastrous attacks of these parasites. A feast called *Robigalia,* to this deity, was always kept on the 25th of April, to deprecate blasting and mildew. American farmers do not celebrate the feast Robigalia, but they show great reluctance to encourage the critical study of the causes that destroy so many millions of bushels of their grain. If a single dollar has ever been expended in these United States, by Congress, a State Legislature, or any agricultural society, to investigate the nature of mildew, rust, or smut of any kind, the fact has wholly escaped our reading.

For many years the *Berberry* was thought to produce mildew and rust on grain. At length it was discovered that the leaves of this bush furnished support to a uredo called *æcidium*, as shown in fig. 10.

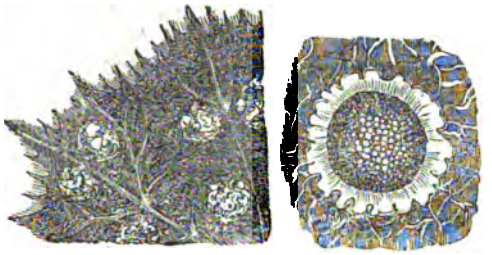


Fig. 10.

On the left is seen a piece of the leaf of the berberry, with the spots of the *æcidium* upon it. On the right is one of these receptacles, containing spores, magnified, to show the form of this fungus. The mycelium on which it grows is also visible. Geraniums and rose bushes are quite subject to this uredo. There is really as little mystery how parasite plants subsist, as there is how aphides, (plant lice,) or lice on a calf's back, live. Destroy the vitality in the seeds of smut on wheat, and they will no more grow than a dead horse can run a race with a living one. We have seen the germs in seed wheat killed by soaking the grain too long in brine, copperas water, and a solution of blue vitriol, to destroy smut. We speak from experience and careful experiments, when we say that no farmer can safely steep his seed wheat in strong brine over four or five hours, without having the grain take up too much salt for the healthy growth of the young plants.—The seed should be dried in slaked lime. It is far better to sow salt on the land, and let it be largely diluted before it comes in contact with the tender germs of wheat.

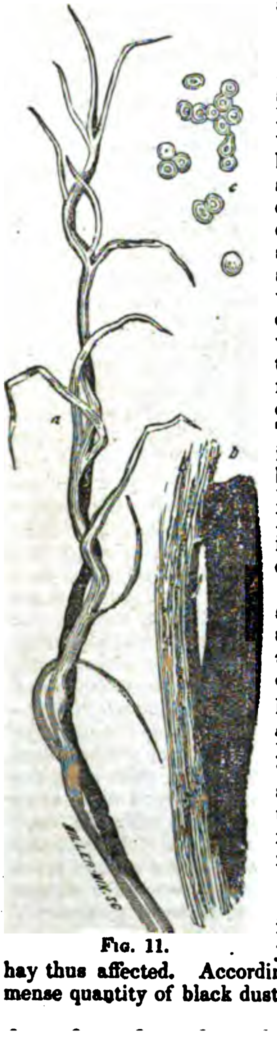


Fig. 11.

The next fungus we shall describe, is closely allied to uredo, and called *ustilago*. It is mainly confined to grasses, and properly speaking, is a *grass-smut*. In a very young stage, the structure is thread-like, but all traces of the mycelium soon disappear, and nothing remains but a mass of minute spores. (See fig. 11.)

In France, this fungus is so abundant as to injure cattle that feed on hay thus affected. According to Leville, the immense quantity of black dust arising from this smut, produces serious maladies in hay-makers, causing swelling in the head and face, violent pains, and great irritation over the whole system. The poisonous and medicinal effects of the ergot fungus, (*ergotetia abortifaciens*,) is well known.

English grasses are subject to another ustilago, called *typhoides*, which attacks their stems, and renders the hay nearly worthless.

Agarics are a class of fungi of which mushrooms are types. *Fairy-rings* throw out their spawn in a circular direction, and the ground is continually exhausted by the spreading of the plants from a common center.

In some countries, grasses and grain, particularly winter barley and rye, are destroyed by a curious mold which is developed beneath the snow; and if it makes its appearance in snow without a previous frost, it is often fatal to the whole crop. Although this mold has not yet appeared in Great Britain, we are inclined to believe that there is a variety of mold in this country, which will grow on wheat and grass under snow, with great luxuriance.

The parasitic fungi that attack leguminous plants, (peas, beans, and the like,) are either mildew (*erysiphe*) or *diapazea*. The word *erysiphe* is the Greek for mildew. This blight on peas infests the fruit of grapes, peach leaves, and in its early stage is a jointed mold, seemingly quite superficial. On close examination, it shows little globules that change from yellow to black, and spring from a flocose web filled with minute sacs containing the *sporules*. (See fig. 12.) These globules, and the sacs containing spores, or sporules, are here depicted; and a good idea may be had of this fungus by inspecting the drawing. They put out fibres, which lift them up from the surface of the leaf, and are preceded by threads, white or grayish, consisting of bead-like joints, of which it seems that the uppermost fall off and grow. Beans are also injured by a uredo.—From the use of flowers of sulphur, mildew has been destroyed on peach leaves and grapes; but on field crops of peas, no remedy has been found, except clean culture, and seeding with oats to keep the vines from falling upon the ground.

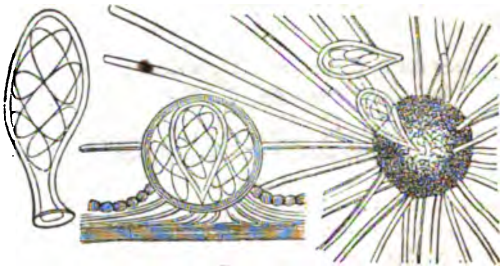


Fig. 12.

Giving Medicine to Ruminants.—All medicines given to ruminants, or cud-chewing animals, of a nauseous nature, should be given in a fluid form, and poured slowly and gently down the throat, holding the animal's head no higher than is necessary to prevent the liquid from running out of the mouth, and leaving the tongue free, that the animal may have command of its swallow. Medicines given in a solid form will go into the paunch, and if nauseous, they will give a distaste to the contents of the stomach, and prevent rumination, which is attended with danger.

S. W.'S NOTES FOR THE MONTH.

IT COSTS TOO MUCH.—Ask a farmer why he don't farm better, take more pains to make, save, and apply manure to his crops, and he will say, "it costs too much." Ask him why he don't put his land in better order, plant in better season, tend his corn better, and earlier, that it may be ready to make the coming draught available; his reply is, "it costs too much." Ask him why he don't fall plow his old meadows, so that the frosts of winter may kill the worms and pulverize the heavy loam ready for a spring crop; his reply is, I am too much hurried in the fall to break up sward, and to hire, "it costs too much." Ten to one he urges the same reason in the spring, why he hurries the seed into a half-tilled field, that his work all comes at once in the spring, and to hire, "it costs too much." If Providence does not interfere and give a season just right to aid slovenly tillage, this man's crops will not pay even for the stinted labor bestowed on it; but in the event of a short crop, the season bears the blame. Thus this unfortunate man goes on stultifying himself from year to year, in the implicit belief that because he takes as much pains to grow a crop as his father did, it is the fault of the season that he don't get as good crops as his father did. If you tell him that his soil is worn down and exhausted, he will reply that he clovers and plasters just as his father did. If you tell him that a green crop cannot forever compensate for the loss of nitrogen carried away by a succession of cereal crops, and that he must make and apply more stable manure, nine times out of ten he will turn the subject and talk of something else.

Some farmers seem to think, and I don't know but they are right, that no man has a right to teach or to know anything about farming, unless he has himself already, by bad husbandry, worn out one or two farms. I heard of a farmer in a neighboring county, who keeps a large stock of cattle, stables them in winter, litters them well and makes a great deal of manure. This year his corn crop did not pay for the tillage, because that enormous pile of manure was too formidable to be attacked by the farmer's working force, and he averred "that it cost too much to hire." This great dung heap now stands wasting, a monument of reproach, instead of honor, to him that made it. Had he done like many of his neighbors who now laugh at his folly, kept but little stock, without stabling or litter, and half the time in the highway, he would have had no manure heap to stand as a reproach, and his neighbors would have neglected to laugh at a man who was a *fac simile* of themselves. *Waterloo, N. Y., Jan.*, 1851

THRESHING OATS.

MESSRS. EDITORS:—If the farmers of this vicinity keep pace with the improvements which are now going on around them, they will have to be on the move. A few hours only elapse from the time of shipping such articles as the farmer may have to dispose of, before they are in New York City—the best market in the United States. But here, as in all other markets, the condition in which the article appears has much to do with the price which is received for it.

I wish to say one word to the farmers of this region, and to all whom it may concern, about the threshing of oats with a machine. If the farmer has cattle, it is much the best way to thresh oats with a flail, and the cheapest. I will give the cost, in this town, of threshing 600 bushels, calling it a day's work for a threshing machine:

COST OF THRESHING WITH A MACHINE.

Cost of threshing, $2,00 per hundred,	$12,00
Four horses,	2,00
Four hands,	3,50
Board of seven hands,	2,00
Board of eight horses,	2,00
Total,	$21,50

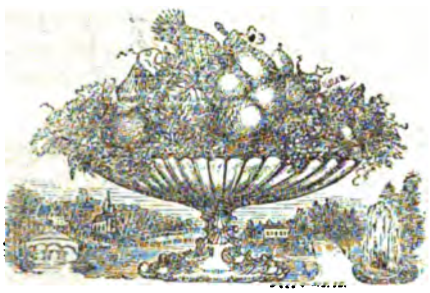
COST OF THRESHING WITH A FLAIL.

Hand, at $13,00 per month, 30 days,	$15,00
Board four weeks,	8,00
Total,	$23,00

Any farmer can tell whether he had rather have oats threshed with a flail, or machine, by the trial; and the improved condition of the cattle will testify in favor of the flail; and unless the thresher be uncommonly wasteful, the farmer will have more bushels of oats, and his straw will be worth double.—Think of it, brother farmers, figure it up, and see how it stands. ARTEL.—*Hornby, N. Y., Dec.*, 1850.

CANADA THISTLES.

THE subject of Canada Thistles is often spoken of, and the modes of eradicating them suggested in the pages of the Genesee Farmer. But some who have succeeded in destroying them once, do not seem confident that the same mode will always be equally efficacious. Now a word on this subject. I have been greatly annoyed with thistles—have supposed it impossible to extirpate them—have mowed them in all times of the moon—have salted them—and have plowed them two or three times in a summer—and still they have been the victors. And they will continue to be the victors, wherever the ground is tilled, unless the design and determination is to till them to death. If plowing is the mode resorted to, it will be absolutely effectual in a single season, if repeated so often that the shoots cannot come to the surface and there enjoy the light and heat. But if plowed only once, or twice, or even thrice, in a season, and the shoots be permitted to come to the light, and grow two or three inches, it amounts to nothing more than a transplanting of the root. A broken piece of root only three or four inches in length, will send up a shoot almost equal in size to the root itself. I am confident that in breaking the roots in plowing our summer fallows and other grain fields, and scattering the pieces by the harrow, the plant is spread more than by the scattering of the seeds on the wings of the wind. In hoed crops they can be entirely destroyed in a single season, by going through the field as they appear, and with the hoe cutting them off a little below the surface. But even then, the inch of root thus cut off must be turned up so as to wilt and dry, or it will continue to grow. In small patches, as in the garden, and ornamental grounds around the mansion, I have entirely destroyed them in a single season by cutting them below the surface with a weeding trowel, as often as they appeared. The process of repeated plowing, as stated herein, when the patch is extensive, or the use of the hoe or trowel as suggested above, can be confidently relied upon as entirely effectual. B.



Horticultural Department.

EDITED BY P. BARRY.

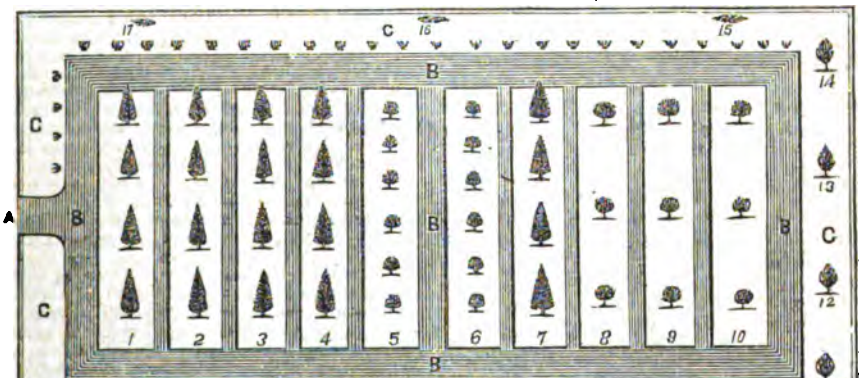
A SMALL FRUIT GARDEN.

A very large number of persons in our cities and country villages have little gardens, that if well managed might produce a considerable amount of fine fruit, and be a great source of recreation and amusement at the same time. Managed as they generally are, filled with half a dozen standard trees that take five or ten years to come into bearing, they are comparatively of little account. Very few persons who possess such gardens as these, have sufficient leisure to enable them to cultivate culinary vegetables; and as in most places these can be purchased for less than it would cost to hire labor to grow them, the garden, in very many instances, is left to weeds, or a very poor, weedy, and unprofitable crop. To such persons we present the annexed plan of a little garden, 50 by 100 feet, planted entirely with *dwarf fruit trees*, all of which may be in bearing the second or third year from planting.

EXPLANATION OF PLAN.—A, is the entrance gate, four feet wide. B, a walk, four feet wide, all around and across the center of the garden. C, a border, five feet wide, between the fence and the walk. It will be seen that the rows are numbered, beginning at the one next the entrance. Nos. 1, 2, 3, are pyramidal pear trees on quince stock: No. 4, pyramidal cherries; Nos. 5 and 6, two rows of dwarf apple trees, one on each side of the center crosswalk; No. 7, pyramidal or dwarf standard plum trees; Nos. 8, 9 and 10, low standard peaches; Nos. 11, 12, 13 and 14, four quince trees in the end border; Nos. 15, 16 and 17, are apricots trained on the fence which has the coldest aspect; Nos. 18, 19 and 20, grape vines trained on the fence with the warmest aspect. One of the fence borders is filled with gooseberries and currants, four feet apart, and the other we will suppose occupied with strawberries, or a few early vegetables may be grown among the trees, but not within less than three feet of the base of the stem.

Here, by this arrangement, we have twelve pyramidal pear trees; four pyramidal cherry trees; twelve dwarf apples; four pyramidal plums, or if grown as dwarf standards, three; nine low standard peach trees; four quinces; three apricots; three grape vines; a dozen gooseberries; a dozen currants; besides space enough for a couple dozen raspberries and one hundred strawberries—in all, about fifty trees besides the small fruits. This, it may be said, is a very large number of trees for so small a place; and so it is; but not one more than we feel very certain can be managed advantageously, if the proper system be adopted. The pyramidal trees are eight feet apart every way; the dwarf apples five feet; the standard and peach trees twelve feet apart in the rows, and the rows eight feet apart; the quinces twelve feet apart in the border; the trained apricots and grape vines, thirty-three feet; and the currants and gooseberries, four feet.

The walks may appear narrow, but in such a small garden horses and carts are not necessary; all the manures can easily be carried into and through them by means of the wheel-barrow, and four feet gives ample room for the use of this machine. The main walks have been placed around the outside, leaving only a border suitable for espalier trees. This arrangement gives the standard trees the fullest benefit of the light. Those who prefer a smaller number of fruit trees, and some space for vegetables, can alter the arrangement to suit their tastes or wishes. In such a case, it might be better to run the walk through the center, retaining the crosswalk as in the cut, and plant pyramidal and dwarf fruit trees in a border, eight or ten feet wide, along the sides of the walk, only leaving all the interior for vegetables.



PLAN OF A SMALL FRUIT GARDEN.

Thirty or forty trees might be introduced in this way, and leave a considerable amount of space for other crops. Between the rows of trees there is a small path two feet wide shown in the figure, intended only for the person who attends to the trees, and not as an ordinary walk. It must not be treated as a walk, but cultivated as any other portion of the ground. For the first three or four years a row of strawberries, or some vegetable crop, may be grown on each side of these paths without interfering with the trees. In this case, eighteen inches only will answer just as well as two feet.

The Soil for such a garden as this should be trenched to the depth of *not less than two feet*, and be made of a suitable texture and richness by the use of composts and manures, at the time of trenching. As a general assortment of fruit trees are to be grown upon it, the texture should be of that character which experience teaches us is tolerably well adapted to all species. This is a friable loam, between the sandy and the clayey. The fences should be eight feet high, in order to render them suitable for the training of the vines and apricots.

Selection of Fruits.—In regard to the trees, we would select the pears on the quince, and of one year's growth, because they are more easily moulded into the desired forms. The cherries on mahaleb stock, and certainly not more than one year's growth. Apples on paradise, one or two years—one year old, cost less and are just as good. The plum, two years old, on any good stock, if dwarfs cannot be had. Those budded or grafted on the wild plum will be more dwarf than on the horse plum, or such large growing species. The peaches will be better on plum stocks, if the soil be somewhat stiff, and they will also be more dwarf than on their own stock. In either case they should be one year old only, and should have stems not over two and a half feet high; the heads to be kept round and compact by annual shortening of the young shoots. Apricots, one year old, and on same stock as the peach, according to soil. Quinces, two years old. Grapes, one or two years old.

Selection of Varieties.—This is an important matter. Those that are best adapted to the stocks recommended, and at the same time of the best quality, and ripening at different seasons, should be selected. For Western New York we would make such a selection as the following:

Pears.—*Summer*—Bloodgood, Dearborn's Seedling, Bartlett. *Autumn*—Beurre Diel, White Doyenne, Duchess d' Angouleme, Louise Bonne de Jersey, Swan's Orange. *Winter*—Beurre d'Arremberg, Glout Morceau, Vicar of Winkfield, Easter Beurre. If a very large and productive cooking variety is preferred, the Pound might be substituted for the Easter Beurre. These all succeed well on the quince, are easily formed into beautiful pyramids, and are of the first quality besides.

Apples.—The largest, fairest and best varieties should be chosen, and principally summer and autumn varieties. Red Astrachan, Sweet Bough, Early Harvest and Summer Rose, for Summer. Alexander, Gravenstein, Hawthorndean, Hawley, Fall Pippin, Duchess of Oldenburg, Dyer and St. Lawrence, for autumn.

Cherries.—May Duke, Belle de Choisey, Yellow Spanish, and Belle Magnifique.

Plums.—Green Gage, Lawrence's Favorite, Washington and Reine Claude de Bavay.

Peaches.—Early York, Cole's Early Red, Crawford's Early, Coolledge's Favorite, Haines' Early, Red Cheek Melocoton, Old Mixon Free, Snow, and Lemon Cling.

Apricots.—Early Golden, Large Early, and Moorpark.

Grapes.—Black Cluster, Isabella, and Catawba.

Quinces.—Orange and Portugal.

Currants.—Red Dutch, White Grape, Cherry, and Victoria.

The cost of such a collection of trees can be readily ascertained by reference to any Nursery catalogue. It need not exceed $25,00.

MIXED PEAR ORCHARDS OF DWARF AND STANDARD TREES.

On this subject there has lately been a good many inquires from various quarters; we therefore copy from the Horticulturist for January, the following account of the beginning of an experiment of this sort by S. B. Parsons of Flushing, L. I., the senior partner of the well known nursery firm of Parsons & Co.:

There are few modes of culture that have made more rapid progress in the United States, than that of the pear upon the quince stock. Ten years ago, these dwarf pears were found in very few gardens, and then only as specimens valuable for their novelty. They were even, until a very few years since, esteemed temporary in their character, and were never planted in a permanent orchard. While this opinion may be to a certain extent true, or rather, while we have no evidence to controvert its truth, and while the pear on its own root must always have the preference in a permanent orchard, yet those on quince may always advantageously have a place in every orchard, and may be profitably cultivated for market fruit. That this opinion is becoming more prevalent, is evinced by the large sales of pears on quince that are made annually, in various parts of the country. To ensure success, they require very different treatment from those on their own root, and as a few years experience may be of value to some who are about planting, I will briefly relate the course that I have pursued with satisfactory results.

Some few years ago, becoming convinced that the profits of the nursery business could not be relied upon, I decided, with our friend Rivers, to cast out another anchor to windward. I prepared at first only four acres, intending with these to test the experiment, and then, if successful, to plant my whole farm.

Although much fruit has not yet made its appearance, the fruit buds promise me so abundant a crop another year, as almost to warrant me in planting to a very large extent.

The field I selected was an old pasture ground, with light loamy soil, but not inclining to sand, and a subsoil of hard-pan. This I planted with corn until the ground was well mellowed, and then put upon it two sloop loads, or 3,000 bushels of stable manure, worth on the ground, $175.

The orchard was then planted with pears on their own root, twenty feet apart. Between these were planted pears on quince, ten feet apart, each row being thus ten feet apart, and the trees in each ten feet. Each alternate row is thus all pears on quince, or half on pear and half on quince, and the whole orchard contains 1,760 pears, 1,320 being on quince, and 440 on their own root. By thus planting, I think I gain a double advantage. Those on quince come in bearing soon, and will produce a good crop while the others are growing, and those on pear will undoubtedly be sufficiently large to produce a good crop, and even to occupy the ground to the exclusion of the others, long before those on quince will decay, if such decay ever should take place.

Pears on quince require high garden culture, and it is my practice to put upon this orchard two sloop loads of manure every year. The first year after planting, the orchard was cropped with corn, which I found to be injurious to the trees. I have since cropped with potatoes and sugar beets, alternately, and with good management, the crop of these can be made to pay for the manure, and sometimes for the labor. With the exception of a single row, all those on their own root are of one variety, the *Lawrence*. This variety originated on Long Island, is hardy, an early and abundant bearer, and a good grower. The fruit of medium size, nearly equal to the Virgalieu (Doyenne) in flavor, is in eating from mid-autumn to mid-winter. and will keep and ripen in a barrel, like apples. Its uniform price in the market in autumn, is five dollars per bushel, and at its latest period of maturity, when no other pears can be found in market, it would probably bring ten to fifteen dollars per bushel.

Of the varieties on quince, I have only planted six.—*Glout Morceau, Vicar of Winkfield, Louise Bonne de Jersey, Winter Nelis, Lawrence, and Beurre d'Aremberg.* With the two latter the orchard is not quite finished, owing to the difficulty in obtaining them. It is always quite as uncertain to form an estimate of a crop of fruit, as it is for our Boston friends to calculate the amount of money they can make from the 250 chickens hatched from the 260 eggs, laid according to guarantee, in 276 successive days, by the pure white Shanghae hen, which may have cost fifty dollars. But after making all reasonable allowances, and finding to-day, upon some of my Vicar of Winkfield trees planted in the spring of 1849, from fifty to seventy-five fruit buds each, I shall be somewhat disappointed if those on quince, in the fifth year from planting, should not produce one dollar per tree. The same result I hope to obtain from those planted on their own root, in the tenth year, after making all reasonable deductions from loss by blight. It will not be safe to estimate that the crop between the trees will always pay the expense of cultivation. With good management, it may do so the first few years; but as the trees grow, the roots will gradually occupy the space between them, when no crop can be grown, although high manuring will still be required.

There may be, and we know in the experieuce of some there have been, obstacles in the cultivation of this fruit, which have not yet obstructed the advancement of my trees, and it may not be safe for all to estimate according to the preceeding statements. Such, however, are the results of my experience; and while it may be expedient to make large allowances for difficulties which may hereafter present themselves, I cannot doubt, that with the present almost entire destitution of good pears, in all the markets, and the facilities of transporting them to England, I should be fully justified in planting much more largely than I have yet done.

ANSWERS TO CORRESPONDENTS.

Grafting the English Walnut.—(J. D. A., Washington Co, Ohio.) It can be grafted on either the black walnut or butternut. Take the scions from the lower end of the shoots, next the old wood, where there is least pith. Cut the scions early, and graft before the stocks begin to grow. Bud roses like any other trees, from June to September. Graft in the cleft manner in the spring, using firm, well ripened shoots for scions.

Hardy Pears.—(J. C. Brayton, Aztalan, Wisconsin.) Bloodgood, Summer Francreal. Buffum, Beurre Diel, Gansel's Bergamot, Dix, Flemish Beauty, Fulton, Seckel, White Doyenne, Swan's Orange, Oswego Beurre, Glout Morceau, Princess St. Germain, Vicar of Winkfield, Winter Nelis, and Pound. We do not know the Perry Russet apple.

(George F. Cook, Lake Co., Ohio.) The blossoms of your grape may be killed by frost, or there may be some deficiency in the soil. We could answer more correctly if we knew the varieties. Give the one that does not bear a dressing of wood ashes, say a half peck, spaded or forked in around the roots.

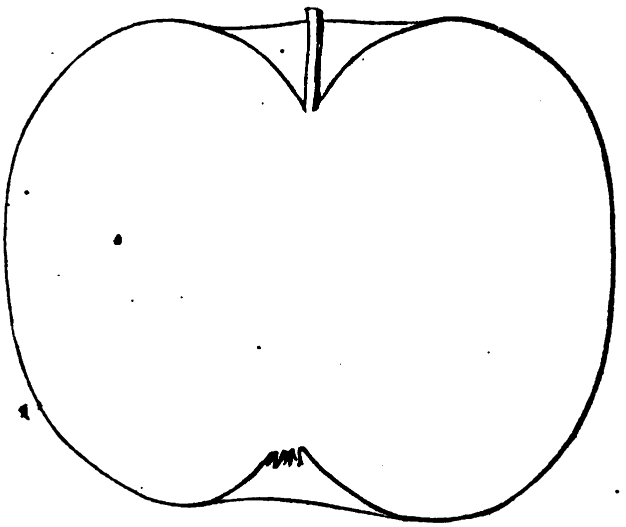
(I. C. B., Groton, N. Y.) Peach stones should be frozen. Walnuts should be kept in moist sandy earth. Plant the nuts in spring, three or four inches apart in drills, and two or three inches deep. Next season, transplant into rows two or three feet apart, and eighteen inches apart in the rows. In two or three years they will be fit for final planting.

(Dr. P., Saginaw City.) There is no English translation of the *Bon Jardenier*. It can be had in French through the New York importers. The flower seeds can all be obtained of leading seedsmen of Boston and New York. A catalogue has been forwarded.

(Faithful Reader.) We would advise you to procure Downing's Thomas' or Cole's fruit books, they will give you all the information you desire. Most of the subjects have been treated of in the back volumes of the Farmer. Prune and cut scions now, and graft in April.

(C. J. C., Painted Post, N. Y.) The "bug" you mention we presume is the *black slug*, very common here, "destroying the leaves of cherry, pear, and other trees, during the month of June. Sprinkle the trees on which you may find them, with lime or ashes, and you will find it effectual.

(J. S., Chemung county, N. Y.) Your trees will not injure in the least, if the roots are covered with earth. You can plant them in the spring as soon as the ground is in order.



DUTCH MIGNONE APPLE.

This proves with us a superb and excellent apple. For two or three years past, we have gathered crops from a specimen tree, that rival in size, beauty and excellence, the best of all the varieties we cultivate. Mr. Downing says, truly, "that it is one of the greatest acquisitions we have received from abroad." The tree is very vigorous and productive, and the fruit always fair and fine. Size, large—three to three and a half inches in diameter, on an average. Form, round and regular. Color, a golden yellow, quite covered with a deep red and mottled in the shade—in some spots, and especially around the stem, slightly russetted. Stalk half an inch long. Calyx, open in a broad regular basin. Flesh, white; firm at first, like the *Ribston Pippin*, but becoming tender as it approaches full maturity; juicy, rich and high flavored. It is an excellent sort for the garden, as a dwarf. It is now, January 15th, in perfection, but will keep till March.

PREMATURE DECAY OF APPLES, &c.

Mr. Barry:—I would beg to state that last season I raised about fifteen bushels of the Green Newtown Pippin. I took them off carefully by hand, on the 15th of October, and packed them in barrels, some of which had contained salt. The apples have become dry and cracked in two, (especially the largest,) and the skin of many of them is black and decayed, and the flavor quite inferior. Whether the cellar is too warm, or whether they were gathered too early, or what the reason is, I know not. I feel some disappointed. I have seventeen trees of this variety, and those were the first of their bearing. I would say that this is a highly esteemed fruit in this part of the country, and bears early and abundantly, when the trees are properly attended to. The soil is well adapted to such fruit.

I expect I shall have the Northern Spy bear next season. I have fifteen trees of it If it is equal to the Green Pippin, I shall think it a valuable acquisition. All my knowledge of fruit-raising has been derived from the pages of the Genesee Farmer. I would just ask a little more, on the best method of keeping fruit, especially apples. Whether they should be laid on the cellar floor, covered, or not, or any simple mode you deem best, and at what temperature they will keep best. I have about one hunred trees, of near twenty-five varieties. A correct knowledge of this is somewhat necessary. James Sharp.—*Dumfries, C. W., Jan.* 1851.

It is difficult to say what the cause of the premature decay of the fruit can be. There is some doubt of their being the *Newtown Pippin*. The best way to keep apples, is in clean barrels headed up, in a *dry, cool* cellar. The lower the temperature the better, provided frost be excluded.

Ladies' Department.

LADIES' WORK STANDS.

WE give, this month, engravings of two *Ladies' work stands.* The first consists simply of a light frame covered with silk, or any other material that may be preferred, and attached to a common stand. This frame almost any one can make in an evening, and it can be ornamented with fringe or tassels to suit the fancy. The engravings and following remarks are from *Downing's Country Houses:*

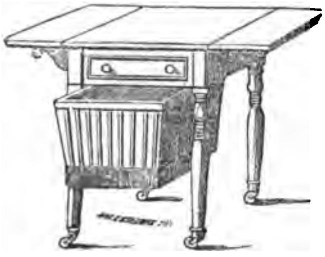


FIG. 1.

"*Ladies' work tables,* (fig. 1,) are popular English furniture for the sitting-room, and are usually made of mahogany or walnut, and fitted up with a silk bag with a fringe, attached to a frame that draws out. This bag is a very convenient receptacle of various articles of needle-work, which otherwise would, perhaps, lie about upon chairs or sofas, to the discomfort of all parties, and the detriment of the work itself.

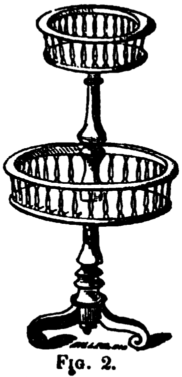


FIG. 2.

A pretty and more convenient article for this purpose, and one more suitable to the parlor, is the *basket stand,* fig. 2, being easily lifted and carried about from one part of the room to another — wherever it may be most agreeable to sit. These are made in various modes, either very tastefully and fancifully of rosewood or mahogany, curiously carved, for the villa; or of rustic work, varnished, in the Swiss manner, or of bamboo, after the Chinese fashion, for the cottage. This style is cheap and neat, but persons can exercise their taste in construction."

CREDIT THOSE TO WHOM IT IS DUE.

MESSRS. EDITORS:—In a well written article in the November number of the Genesee Farmer, entitled "Agricultural Societies and Exhibitions," you commended the conduct of the Rochester ladies for their exhibition of bread at the Horticultural Show in Rochester, as worthy of imitation in other Societies. The writer cannot commend the conduct of the Rochester ladies, and all others, too highly, who seem disposed to excel in this most useful art, and true feminine accomplishment, to produce with their own hands, in its utmost perfection, "the staff of life." As is justly remarked, in the article alluded to, many societies in this State, and in Massachusetts, during the present year have awarded premiums for the best loaves of bread exhibited. But some of these societies, as we have reason to know, first caught this idea from the remark of the Hon. MARSHALL P. WILDER, of Boston, made in an address before the Norfolk County Society, of Massachusetts, in the fall of 1849. And in fact, we think to him belongs the credit of introducing this important matter to the notice of agriculturists, and their excellent wives and daughters. Mr. WILDER has labored long and done more, perhaps, to advance the interests of horticulture than any other practical man in the country. And agriculture, too, in many of its branches, has felt his influence. It is with a view, therefore, to credit those who are willing to devote their time and talents for the benefit and improvement of the agricultural interests of the country, that we forward these few lines.

I will say, farther, that the Norfolk Society, before which Mr. WILDER held this language in 1849 —"No father should consider his son *well* educated, till he knows how to gain his support from the soil; and no mother her daughter, however accomplished in all other respects, until she knows how to make *good bread*" — were so impressed with the utility of this part of female education, that at the next annual exhibition of the society, held in September last, sixty-six ladies were competitors for the superiority of their *bread.* They exhibited one hundred and seventy-five loaves, and were awarded two silver cups of the value of twenty dollars, by the President, two silver cups of the value of twenty dollars by the Society, and two barrels of flour, of the value of fourteen dollars. Other societies have caught the suggestion, and have been liberal in their rewards, and another year will doubtless witness a distribution of premiums by almost every agricultural society in the country, for the best quality of *bread,* as well as for the more fanciful products of a delicate hand.

DUTCHESS.

SIGNS OF IMPROVEMENT.

MESSRS. EDITORS:—In your *Ladies' Department* for December were the following words: "We hope the little good seed sown has not been cast entirely by the wayside." For myself I think that any one who travels our public, or even our by-roads, will see enough to convince him of the fact, that people in general are improving, both in the taste and style of building. To you, and others of the same stamp, are we indebted, in a good measure, for the improvement in the public mind with regard to plans for building, not only dwelling houses, but out-buildings also. Where you would originally see a long, narrow, two story house, half finished with an enormous amount of room, and but precious little comfort or convenience, you now see a neat, tasty little cottage. Of late, I have often seen, on passing along some of our back roads, a neat little love of a cottage, half hid among the stumps of a newly cleared field, showing conclusively to my mind, that the originator had got his ideas of taste and beauty, one step above the old track.

May we not hope to see our brother farmers, and all others, surely and steadily rising toward perfection in that most independent of all callings, until our lands, that now yield twenty, shall yield some sixty, and some "an hundred fold." And not alone among the ladies, will you find those to sympathize with you in your work, but many, many, if not all, of the hard working farmers who take the Genesee Farmer, will honestly and heartily sympathize with you in your endeavors to raise the standard of American agriculture. J. B. C.—*Groton, N. Y., Jan.,* 1851.

TRUST him little who praises all — and him less who censures all.

Youths' Department.

THE POULTRY YARD.

In the absence of some engravings which we failed to procure, illustrating the *wonders of vegetation*, we give a chapter on the feathered tribe. We do this with more pleasure, as some of our young friends in their communications have requested us to give as much information as possible about fowls. Now our young readers must remember that we have in our 30,000 subscribers a variety of tastes to please. Some desire all possible information about fowls, the best kinds, the best way to keep them to get the greatest amount of profit, &c. Others are turning their attention to fruits and flowers, and look to the Farmer as their guide. Still others care but little about these things. They want the main crops—corn, potatoes, and wheat—treated of, as it is on these they depend for support. We shall endeavor to give all "a word in season."

THE PEACOCK.

The peacock is too well known to need a lengthy description. The pea fowls are natives of India, where they are now found wild in large flocks.—They are the most beautiful birds that grace the poultry yard. But, like some young folks we occasionally see, they have little but their beauty to recommend them. In regard to their disposition, Brown, in the *Poultry Yard*, gives the following account:

"The natural disposition of the peacock is selfish and gluttenous, and it is only by pampering this weakness that he can be persuaded into obedience and attachment. He is vain, and at the same time ungallant. He is far from manifesting the politeness and attention which the common cock shows towards his mates. The peacock will greedily snatch from the mouth of his hens those tit-bits and delicate morsels which the cock would either share with his favorites, or yield to them entirely. The peahen, in return, cares less for her lord and master, and is more independent of him. Nor does he seem to care much about her admiration, or to make the exhibition of his attractions to secure her notice, but is content, if he can get some astonished hen, or silly bewildered duck, in a corner, to wonder what all the fuss is about." They are in some cases cruel towards the young of other poultry.

THE GUINEA HEN.

The plumage of this bird is singularly beautiful, being spangled over with an infinity of white spots on a black ground, shaded with gray and brown. A white variety is not uncommon, but is less hardy. It is not every one who knows a cock from a hen of this species. An unerring rule is, that the hen alone uses the call note "come back," "come back," accenting the second syllable strongly, from which they are often called "come backs." The cock has only the harsh, shrill cry of alarm, which, however, is also common to the female.

The Guinea cock is what is called *monogamous*, or having but one mate, like the patridge or pigeon. He is, however, very polite and attentive, and in this respect shows much better manners than the peacock. The hen lays month after month with little or no intermission.

THE SPANISH FOWL.

This is a noble race of fowls, possessing many great merits; of spirited and animated appearance, of considerable size, excellent for the table, both in whiteness of flesh and skin, and also in flavor, being juicy and tender, and laying exceedingly large eggs, in large numbers. They are entirely black, and beautiful fowls, but too delicate for our climate.

Editor's Table.

Annual Meeting of the N. Y. State Ag. Society.—The annual meeting of the State Agricultural Society was held at Albany, on the 15th inst. The following officers were elected for the ensuing year:

President—John Delafield, of Seneca.
Vice Presidents—William Buell, of Monroe; Silas M. Burroughs, of Orleans; Lewis G Morris, of Westchester; Anthony Van Bergen, of Greene; Augustus L. Clarkson, of St Lawrence; Henry Wager, of Oneida; Benjamin Enos, of Madison; Ray Tompkins, of New York.
Corresponding Secretary—B. P. Johnson.
Recording Secretary—J. McD. McIntyre
Treasurer—L. Tucker.
Executive Committee—Ambrose Stevens, John B. Burnett, M. G. Warner, Josiah Bissell, Benj. B. Kirkland.

Rochester was selected as the place for holding the next Fair, and the time set is the 16th of September. Western New York will now have a fine opportunity to show her productions, at the most favorable time, and under the most favorable circumstances. Nothing now remains but for every farmer to do his duty, and the exhibition next fall will not only be *one* of the best, but *the best* ever held.

The price of life membership, which was $50, was reduced to $10 Altogether we are pleased with the acts of the State Society, at their last meeting.

We cannot avoid noticing a rather amusing part of the proceedings that transpired while we were present. A statement was made that a Mr. Comstock had actually discovered "the secret of vegetation," and a committee of gentlemen well skilled in vegetable science, was appointed to investigate and report upon the discovery. We await the result with great impatience, of course.

The address was delivered by A. J. Downing, Esq., of Newburgh. Engagements prevented us from hearing it, but we have heard it highly spoken of, as we are sure it deserves to be. The principal subject was, *A State Agricultural School*—a topic quite seasonable and interesting, both for the occasion and the times.

At the *Fruit Exhibition*, there was a very fine display of winter apples, a large proportion of which were from Monroe and Wayne counties. Among them, the *Northern Spy* and *Wagener* were conspicuous and much admired. Some pears were presented, but not until after we had left.

Mr. Townend Glover, of Fishkill Landing, exhibited a beautiful collection of artificial fruits, including apples, pears, plums, cherries, and indeed all the fruits. They were the best executed and most natural of any we have ever seen, and we are glad to learn that their merit has been duly appreciated and rewarded by the Society. Mr. G. has received an order for a complete collection for the Society's rooms, and every horticultural society, and nurseryman in the country, would do well to procure a collection. Mr. Glover is making arrangements to furnish them on moderate terms. Some very beautiful paintings of the *Northern Spy*, *Wagener*, and other popular fruits, were exhibited by James H. Watts, of Rochester. They were executed by Mr. Joseph Prestile, of the Ebenezer Society of Buffalo.

The February Number.—We intend that our most distant subscribers shall receive their numbers of the Farmer by the 1st of each month, or at farthest within a day or so of that time. In consequence, however, of the unprecedented and unexpected increase of our circulation, we have been so busily engaged in entering the names of our friends in our books, and forwarding the January number, that a little delay this month seemed unavoidable. To all our friends who have so essentially aided in extending the influence of our monthly visitor, we tender our hearty thanks and shall endeavor to give them no cause to regret recommending it to the attention of their neighbors.

Postage of the Farmer.—As some Postmasters who have taken an interest in circulating the Farmer, are in doubt as to the postage they are required by law to charge, we re-publish the decision of the Asst. Post Master General.

Post Office Department,
Appointment Office, Dec. 13, 1849.

Sir:—In reply to your's of this date, I have to inform you that the "Genesee Farmer" published at Rochester, New York, is regarded as a newspaper, and should be rated with one cent postage when carried in the mails over one hundred miles, or any distance within the State; and if carried over one hundred miles, and out of the State in which they are mailed, one and a half cents postage.

I have the honor to be, Very respectfully, &c.
FITZ HENRY WARREN.
Second Asst. Post Master General.

Extracts from our Letters.—In our business letters we find many choice things, which, would our space permit, we should be much pleased to present to our readers. Receiving over a hundred letters each day, from all parts of the country, we gain from this source a pretty good idea of the state of public sentiment among our agricultural population. We rejoice that the signs of the times show an increasing interest in all that relates to the agricultural profession. B. T. Cooke, of Binghampton, N. Y., writes—

"The taste for improving the soil—for producing not only the necessaries, but the luxuries of life—for exhibiting the earliest and choicest varieties of vegetables, fruits, and flowers, among our villagers; and for rearing fine stock, poultry, &c., and improving farms, in the "rural districts,"—is becoming a passion with many, and exciting an increasing attention with all."

We have among our voluntary agents many that are young, some enterprising ladies, and a few whose heads are whitened by the frosts of many winters, and whose limbs totter by reason of the infirmities of age. The following is an extract of a letter from Hervy Johnson, of Holland, N. Y. We publish it as an example to the young. By industry and temperance, the old man has retained his faculties—has outlived the allotted time of man's life, and now writes a fair hand, and shows both by word and deed, that he is still able to act well his part:

"I have been thinking of giving up the agency of the Genesee Farmer for a number of years, in hopes that some man more able than myself would undertake it; but I can't find him. I am now an old man. (I was born December 26, 1776,) I keep neither horses nor oxen, and it is very hard work for me to get about and walk in deep snow, with very little path; but the importance of an extensive circulation of the Farmer, stimulates me to put the best foot forward; for my district is large. I have spent two days, and to-morrow I think of starting again, and shall try, and keep trying; but I assure you it is hard work for my lungs, as well as for my body and legs. In addition to my time and fatigue, I always have some postage to pay. I had to break a path into the woods alone, and to shovel and wallow about 130 rods; but I accomplished it, procured a team, and got up some wood. This evening I am trying to write, so as to be ready to start on my mission to-morrow; but I must give it up until morning.

"*Christmas morning*—At fifteen minutes before four I arose from bed. We generally take breakfast before six o'clock. This is the way I work to get subscribers for the Farmer. It is the most difficult time in the whole year to get subscriptions, for the tax-gatherer will soon be calling. Tell others to follow my example—drink no spirits nor use tobacco—and you will have an overwhelming subscription. Tell them this from "Old '76," (this is the appellation they give me,) "old go-ahead." Do you like to hear an old man boast?

"I have had better success to-day than I have had at any other time—I send you the names of seventeen subscribers It is laughable to see how many ways people find to put me off. But I have got through for this year, and have made out better than I expected. I have sent five dollars, and shall try again at our March meeting, and keep trying as long as I can talk."

W. A. Bacon, writing January 11th, from Paris, Ky., and sending a large list of subscribers, makes the following remarks:

"The Horticultural Department, presided over with so much ability by friend Barry, suits our latitude better than the Agricultural; besides, the cultivation of fruit is receiving increased attention. The winter, thus far, has been very mild—very little snow or ice yet. The last ten days have been spring like; indeed, it seems like spring to see plows running, and the thermometer near summer heat."

Oscar F. Warren, of Erie county, who has for many years sent us a large list of subscribers, as an apology for coming a little short this year, encloses us his marriage notice. This will not do, Mr. W., we must hold you for a larger list than ever, under so favorable circumstances.

We should be pleased to give many extracts from our letters, but space at the present time forbids. We may give others in the next number

Monroe Co. Ag. Society—Annual Meeting.—The annual meeting of this Society was held on Saturday last, at the office of the Farmer. The attendance was larger than usual, and considerable interest was manifested in the proceedings and prosperity of the association. The report of the proper officer exhibited a handsome balance in the Treasury. Officers were elected for the current year as follows:

President—Lyman B. Langworthy, of Greece.
Vice Presidents—Calvin Sperry, of Gates; J. M. Babcock, Irondequoit; Elisha Harmon, Wheatland.
Treasurer—John Rapalje, Rochester.
Rec. Secretary—J. Vick, Jr. Rochester.
Cor. Secretary—D. D. T. Moore, Rochester.

Field Crops.—The first premium on Carrots, $6, was awarded to Nath'l Hayward of Brighton—his crop producing 1035 bushels per acre.—A premium of $4 was awarded to Alfred Fitch of Riga, on a crop of Mangel Wurtzel—no competition.

Addition to Clubs.—Those who have formed clubs of *eight* or more, can make additions at the lowest club terms, (*three shillings.*) Those who have forwarded five can enlarge their clubs to eight, by forwarding one dollar. Some of our friends send on the price of single subscription, when making additions to their clubs.—This we do not ask. We can supply the January number, and any back numbers, as the Farmer is stereotyped. We can furnish numbers of last year to any who may have lost them, and wish to get the volume bound We have also on hand bound volumes from 1845. At this time the Farmer was changed from a quarto to its present form, and the volumes are uniform, and can be had at 50 cents each, bound in paper, or 63 cents bound in boards. We do not require that all the papers in any club should be sent to one office, as some suppose. Our friends must consult their convenience in this matter.

Youatt on the Horse.—We have received from the publishers, Derby & Miller, of Auburn, a new edition of Youatt on the Structure and Diseases of the Horse, with an account of the breeds in the United States, by H. S Randall. This is a fine edition of Youatt's celebrated work.

A TREATISE ON HOT HOUSES. By Robt. B. Leuchars, Garden Architect, Boston. John P. Jewett & Co, Boston, 1851.

We have only space in the present number, having been absent while the greater part was made up, to announce the appearance of this work. It treats of the construction, heating and ventilation of Hot-houses, Green-houses, Conservatories, Graperies, &c., illustrated with numerous engravings. From the character of Mr. Leuchars, as an experienced, practical man, in his profession, we have no doubt that it will prove a very valuable and timely addition to our garden literature. We shall examine it and say more of its contents hereafter. Copies can be supplied at this office. Price $1,00.

Mr. Leuchars offers his services to the public, in this and kindred departments of horticulture, and we hope he will receive ample patronage.—b.

Winter Exhibition of Fruits.—The Horticultural Society of the Valley of the Genesee, gave an exhibition of Fruit on the 11th of January. It was the finest winter exhibition we have seen in a long time. The apples and grapes were fine and abundant. Our friends must pay more attention to the cultivation of Winter Pears.

Bullard's Panorama of New York City.—We accepted an invitation from the proprietor, and visited this exhibition a few days since. If any of our readers should have an opportunity, they will be well paid for their attendance, and learn something of the great metropolis, without the sacrifice of money and comfort with which that knowledge is generally acquired.

A New Churn.—We have been requested to examine a new Churn, the invention of R. W. & D. Davis, of Rogersville. We have not yet found time to examine it carefully, or test its merits. It may be seen at the Agricultural Warehouse of Rapalje & Briggs, Rochester.

Apple Scions.—Those who intend to improve their orchards, are referred to the advertisement of Mr. Watts. Mr. W. has long taken an interest in the cultivation of choice varieties of fruit, and our friends may depend on getting whatever they order, genuine.

M. B. Bateham, of the Ohio Cultivator, says he has been presented with a bottle of *real temperance wine* made in Ohio, "*expressly designed for ladies and clergymen.*" As the editor belongs to neither of these classes, we presume he will not be so presumptious as to taste the "*expressly*" forbidden beverage.

Godey's Ladies' Book.—Among the most beautiful publications of the country are the *Ladies' Books*. *Godey's* for January and February are worth the cost as specimens of art Some of the *model cottages*, however, are rather poor models.

Communications.—We have still on hand, and even in type, many articles furnished by our correspondents, which we shall make room for as fast as possible. The fact that articles do not appear for a month or two after their receipt, is no evidence that they are rejected.

C. Kelly & Co., nurserymen, of Hamilton, C. W., will act as agents for the Genesee Farmer, and forward orders from that vicinity.

Morgan Stock.—We are informed by a correspondent, now on a tour through the southern tier of counties, and who is a connoisseur in such matters, that Wm. J. Dorr, of Scottsville, has a couple of beautiful horse colts of this breed, sired by that excellent representative and descendant of the late "Gifford Morgan," "General Gifford." They are from a dam very much resembling, in fire, energy and general appearance, the Morgan race. These colts are blood bays, colored alike to a shade, with heavy black manes, tails, and legs, of fair size, with all the muscle and symmetry for which the sire is celebrated.

Long and Rotten Manures.—Were we not guided by experience, perhaps we should be led to imagine there would not only be a saving of the ammoniacal salts, phosphates, &c., by applying manure fresh to the soil, but that all soils would be equally benefitted by being thus treated. Not so. The chemical action of the manure will be equally efficacious on light and heavy soils, but this is more than counteracted by the injurious mechanical action. Whi'st unfermented dung will prove most beneficial to our clays, half rotten dung will be most efficacious to soils of a medium texture, and rotten dung to our light ones. Decomposed farm-yard manure is no better adapted for every soil than one man is adapted for every profession.—*Ag. Gaz.*

To Officers and Soldiers of the Revolution, their Widows and Heirs.

FOUND, about the 1st of January, 1851, a large quantity of the old original records of the services of several thousand *Officers*, (in the Commissary and Quarter-Master's Department,) *Surgeons, Artificers, Wagon Conductors, Wagoners, Teamsters, Carpenters, Blacksmiths, Boat Builders, Fatiguemen, &c., &c.*, in the war of the Revolution. These records have been preserved by descendants of Officers, and are admitted as authentic in establishing claims against the Government. Officers, soldiers, their widows, or heirs, who have omitted to assert their claims, or failed to obtain their just dues, when application has been made, for want of evidence or assistance in prosecuting their claims, are informed that the subscriber having been engaged for nearly ten years past in prosecuting claims for Pensions, Bounty Lands, &c., collecting documents and statistics relating to the Revolution, he is prepared to aid, promptly and vigorously, all persons who require the assistance of an agent or attorney in prosecuting claims before Congress, or any of the departments at Washington.

Persons, or the widows of such as served in the capacity of either class above named, *who have been pensioned*, will find it to their interest to send a statement of facts to the subscriber, as but few of those received what was justly their due.

Letters of inquiry or application should be addressed to the subscriber, *post-paid*, at Washington City, D. C.

February, 1851. WILLIS G. WADE.

KETCHUM'S PATENT MOWING MACHINE.

THE subscribers having purchased the entire interest of the inventor, Mr. Wm. F. Ketchum, and also the interest formerly owned by S. W. Hawes, are now manufacturing the above Machine in the city of Buffalo. The Machine has been greatly improved, and is fully capable of performing all we recommend it to do.

The price of the Machine is $100,00 with one sett of knives, and $110,00 with two sett of knives.—Cash in Buffalo.

Any information wanted, or orders left with Mr. George Sheffer, Scottsville, Monroe Co., or Mr. Morgan Butler, New Hartford, Oneida Co., will meet with prompt attention.

February, 1851. G. W. ALLEN & CO.

To Nursery Gardeners.

A GENTLEMAN wishing to establish a Nursery Garden, desires to enter into arrangements, for that purpose, with a person who understands the business. 8 to 12 acres, or such other quantity as may be required, of excellent land will be furnished, with a comfortable dwelling house, and the use of a Green House, rent free, till the business could yield a return. Situation—Two miles from Kingston, Canada, on the high road. A very moderate capital would suffice.

Apply (if by letter, post paid,) to Messrs. ELLWANGER & BARRY, Rochester, N. Y., or to J. H. W., Kingston, Canada.

February, 1851.

Miner's Bee Hive.

THIS beautiful and highly valuable practical Hive, is unsurpassed by any other in the United States. The Rights are in pamphlet form, with full engravings, and ample directions to make it. Price $2 only; sent by mail to any section of the country. This is positively the only Hive of *real* merit to be had.

Also, the AMERICAN BEE-KEEPER'S MANUAL, 350 pp., 35 fine engravings; the most popular work ever published on the culture of bees. Price $1; sent by mail also. Address to this office, *post-paid*.

Gen. Farmer Office, Rochester, June, 1850. [6-tf]

THE NEW YORK REAPER.

MANUFACTURED BY SEYMOUR & MORGAN.

THE undersigned after many years experience in the manufacture of the different Reapers heretofore used, are at last. by the application of new principles lately patented, and to which they have the exclusive right, propared to offer to the farmers of the United States a

PERFECT REAPING MACHINE,

which in durability of construction, perfect manner of cutting grain, and the ease with which it may be worked, *has never been* equalled.

The following are some of the advantages possessed by this Machine over any other heretofore used:

1. The Finger-piece is placed within the circumference of the driving wheel, and the other ground wheel placed nearly opposite, and greatly increased in size, which lessens the power necessary to work the machine at least one-third, and does away with all difficulty in backing and turning.

2. The method of changing the cut is so improved that it can be done instantly on the small ground wheel by means of a lever, and on the driving wheel in much less time than in any other Reaper.

3. The sickle or knife is constructed of patent hollow teeth which CANNOT BE CLOGGED, and which in case of accident can be repaired by any good blacksmith without the least difficulty.

4 The man is placed on the backside of the platform, where he has his work directly before him and is capable of performing it in a perfectly natural and easy manner, when compared with the old way of stretching from behind the gearing, with his back towards the team.

5. The gearing is of new and improved construction. combining GREAT STRENGTH AND DURABILITY with perfect simplicity of arrangement, and possesses *Great Advantages*, in many respects, *over all other* similar machines.

We are now manufacturing several hundred of the above Reapers for the Harvest of 1851, and are prepared to receive orders of purchasers for the same Our terms of sale, warranty, &c., will be *as favorable as ever*, and we shall spare no pains to make our work satisfactory; as we are

BOUND TO KEEP AHEAD

of all other manufacturers in the quality of our Machines. We will cheerfully give further information to any one who may address us personally or by mail. SEYMOUR & MORGAN.

Brockport, N. Y., Feb., 1851.

We would here take occasion to refer to a difficulty with C. H. McCormick, growing out of the fact, that we last year manufactured *and sold* a Machine of our own getting up. instead of paying him a patent fee for the privilege of making his "Virginia Reaper" which had been thoroughly tested, and found to be very unpopular with a large portion of the farming community.

The Machine made by us did not in the slightest particular infringe upon any patent of the said McCormick, but the plea was made use of as a bug-bear with which to frighten farmers from the purchase of our Machines. hoping thereby to dispose of some portion of a large number of Virginia Reapers which are now scattered throughout the country (condemned) and now unsold. The Machine we are manufacturing contains none of the parts complained of as infringements, which was only in the position of the Raker; having now placed our Raker in a more favorable position that matter of dispute is done away with and no person need fear the complaints of the maker of the "Virginia Reaper" as he will naturally feel sore that he can no longer monopolize the business of manufacturing Reapers to the great damage of all interested except himself.

The following are extracts from Letters received by us:

West Liberty, Logan Co, Ohio, Aug. 1, 1850.

Gents:—It is with satisfaction that I inform you that the Reaper I purchased of you, performed equal to my highest expectations, and I think it can justly claim precedence over either Hussy's or McCormick's, not only in the construction of the machinery but also in the manner in which it cuts, and performs its work. The greatest improvement is in the cutting apparatus which is far superior to any other in use here, and is just what has long been wanted. All who have seen your Machine have expressed for it a decided preference to any other. Yours, respectfully,

J. P. Buffington.

Urbana, Cham. Co., Ohio. Oct. 18, 1850.

Gents:—I bought one of your Reapers for last harvest, and cut my own harvest of about 150 acres with it. The Reaper performed to my entire satisfaction; it will cut wet and grassy grain and corn stalks without choking. I have seen all the other kinds of Reapers work and believe yours to be the best Reaper ever introduced into this State. Yours, &c., Andrew McBeth.

Covington, Wyoming Co., N. Y., Aug. 10, 1850.

Messrs. Seymour & Morgan—Gents:—We have just finished cutting our wheat, and a very bad harvest we have had, it being bad weather and our wheat very badly lodged down, notwithstanding your Reaper has done well, taking up our lodged grain beyond our expectations, we think it a good way to cut grain doing it with less expense than any other way.

Yours, respectfully, James Gay.

Janesville, Wisconsin, Nov. 1, 1850.

Messrs. Seymour & Morgan—Gents.—I own one of McCormick's, one of Hussy's. and one of your Reapers; upon giving each a fair test the present season I found that where both others clogged so that it was imposible to use them, yours worked like a charm; and I have no hesitation in pronouncing it much the best in use.

Freeman Hitchcock.

Urbana. Cham. Co., Ohio, Oct. 19, 1950.

Messrs Seymour & Morgan—Gents:—I purchased one of your Reapers for last harvest. I have seen the different kinds of Reapers work and consider yours far superior to any other.

Yours, &c., Emanuel Shoupe.

DENSMORE'S SELF-RAKING REAPER.

THIS Machine has been brought to its present state of perfection, at great expense and labor bestowed by one who has had much experience in the practical use of different kinds of Reapers, and a thorough test of its capacities in the last harvest, has proved it to be one of the most important labor-saving Machines of the day. It combines all the advantages found in the different kinds of Reapers in use, while it possesses the important additional advantage of being a *Self-Raker*.

The grain is raked off at the side of the Machine, into snug, straight gavils, by a very simple arrangement, without any hand labor, in better condition for binding than can be done by a man riding upon the Machine, and is dropped far enough from the standing grain to be out of the way of cutting the next swath, so that a whole field can be cut before any of it is taken up.

The saving of labor in using this Reaper over others, will soon pay the whole expense of the Machine. It requires but one man to operate it. One hand and two horses with it, will cut as much grain as seven cradles and leave it in condition that it can be taken up with a third less labor. The driver has at all times control of the rake to make the gavils of any size he may desire, and of uniform size in uneven grain, by means of a lever that is moved by the slightest touch of the foot.

It is simple in its construction and operation, substantial and durable, easy to keep in order, possesses most convenient arrangement for the height cut, from five to fourteen inches, and is of light draft compared with other Reapers. Application for letters patent has been made on these improvements.

Backus, Barnett & Co., of Brockport, have the exclusive right of manufacturing these Machines, in this section, for the next harvest. This firm have recently fitted up an extensive establishment for furnace and machine work, and are manufucturing Rogers' Wheel Cultivators, Grain Drills, a large assortment of Stoves, Plows, and all kinds of Castings; and their experience heretofore, in manufacturing Reapers, their well known reputation as mechanics, and their facilities for doing good work, give the best assurance they will be well built. Those desiring farther information, by writing to the subscriber at Brockport, N. Y., or to Backus, Barnett & Co., will have sent to them a circular containing a description of the Machine and certificates from those who used it last harvest.

We invite the early attention of all those who may desire to obtain Reapers. They will be warranted.

The subscriber continues the business of manufacturing Straw Cutters, and is prepared to furnish to order the best article in use.

BYRON DENSMORE.

Brockport, N. Y., Feb., 1851.

NEW YORK STATE AGRICULTURAL SOCIETY LABORATORY.

OLD STATE HALL, ALBANY.

THE object of the Society in establishing this Laboratory is to furnish those interested in agricultural pursuits an accessible, reliable and ready means for obtaing analyses of soils, animal manures, peat, marls, limestone, gypsum, &c., together with all other information connected with the science of agriculture, which practical chemistry, at its present advanced state, is capable of affording.

The charges for Analyses have been arranged by the Society as follows:

Complete quantitative inorganic analysis of a soil, limerock, gypsum, peat, marl, animal manure,..................	$5,00
Complete proximate organic analysis of a manure, marl, peat, soil,....................................	5,00
Determination of the per centage of water, dry matter, and ash in manures, &c.,..............................	2,00
Analysis of mineral or spring water,....................	7,00

The above fees to accompany all samples or communications. No analysis will be allowed to pass out of the Laboratory until paid for.

The analysis of ores, minerals, rocks, commercial articles, &c, also attended to with care.

For analysis, enough of the above substances should be sent to make half a pound when dry. Of mineral or spring waters, about one gallon is required.

☞ All samples and communications to be forwarded, post paid, to Dr. J. H. SALISBURY, Chemist to the Society, or to B. P. JOHNSON, Esq., Secretary, &c., *Old State Hall, Albany*.

February, 1851.

Farm for Sale.

SITUATED in Brighton, within two miles of the center of the city of Rochester, and within half a mile of the city line, containing about 67 acres, with good buildings, fruit, and other improvements.

For further particulars enquire at the office of the Genesee Farmer.

February, 1851.

PROUD TRIUMPH OF GODEY'S LADY'S BOOK.

AN AMERICAN MAGAZINE.

SINCE publishing the Lady's Book for January, we have, up to the moment of penning this, received an increase to our list that has been unprecedented. This shows that our efforts in the good cause of

AMERICAN LITERATURE AND AMERICAN ARTS

is appreciated. No foreign aid is needed by the proprietor of Godey's Lady's Book. Our January number, which has, we believe without a dissenting voice, been pronounced the gem of the month, is all of *American Manufacture*. We have in store numerous novelties. An opportunity has now been given to make a comparison between our engravings of SCRIPTURAL SUBJECTS and those of others—steel against wood.

COQUETRY, the match plate to "Constancy," published in the January number, will be given in the March number.

GOOD COUNSEL AND EVIL COUNSEL, match plates, engraved by Welsh, will also be published this year, with appropriate letter-press matter.

DRESS THE MAKER AND DRESS THE WEARER, emblematic pictures of *The North*, *The South*, *The East*, *The West*, are also in preparation. Also, the following

SCRIPTURAL SUBJECTS.

Search the Scriptures,
The Creation, in seven tableaux,
The Miracles of Christ, in four tableaux,
The Parables of Christ, in five tableaux,
"We Beseech Thee to Hear us, O Lord!" containing four figures,
Christ & the Woman of Samaria,
Christ Healing the Sick,
Christ on the Mount,
"How Beautiful are Thy Tabernacles, O Lord,
The Acts of the Apostles, in tableaux, from the cartoons of Raphael,
John, Proclaiming the Messiah,
The Separation of the Apostles,
Hallowed be Thy Name,
The Church Porch, Sunday Morning,
The Cottagers. Sunday Morning,
"Lord, have Mercy upon us,"
The First Lesson in Charity,
Backwooods' Worship,
"Suffer Little Childr'n to Come unto Me."
The Guardian Angel,
The Infant Saviour and St. John,
The Return of the Dove to the Ark.

And many, very many, of a more gay and lively character. One of each kind will be given in a number—combining the *grave and the gay*.

The illustration of the Scriptural Plates will be furnished by the REV. H. HASTINGS WELD.

COLORED ENGRAVING.

The "Sylphs of the Season," in the January number, was printed and colored in our own office; also the Vase and Flowers, in the February number. Can there be, has there been, anything more beautiful published, foreign or domestic, in any number of a magazine published in Philadelphia? We may ask the same question in reference to

GODEY'S RELIABLE FASHION PLATES,

Undoubted Receipts, Model Cottages, Music, Crotchet Work, Knitting, Netting, Patchwork, Crotchet Flower Work, Hair Braiding, Ribbon Work, Chenille Work, Lace Collar Work, Children's and Infant's Clothes, Capes, Caps, Chemisetts—in fine everything that can interest a Lady, will find an appropriate place in her own Book.

TERMS.—Cash in Advance, Postage Paid, and no Deviation. They are also the terms of all the Philadelphia $3 magazines.

One copy, 1 year,.......	$3	Five copies, 1 year,.......	$10
Two copies, 1 year,......	5	One copy, 5 years,.......	10
One copy, 2 years,......	5	Ten copies, 1 year,......	20

And one copy extra, for a year, to the person sending the club of ten.

☞ Postmasters, and others sending clubs, will oblige us very much by having them all addressed to one name. It is no inconvenience to them, and will be a great favor to us.

☞ No old subscriber will be received into a club until all arrearages are paid. Address L. A. GODEY,
No. 113 Chestnut St., Philadelphia.
Februaay, 1851.

Agricultural and Horticultural Implements, and Field and Garden Seeds.

UPWARDS of *one hundred* kinds of Plows, and a corresponding variety of all other implements for the farmer, planter, and gardner; embracing the largest and most complete assortment to be found in the United States. Also, Field and Garden Seeds—a large and varied assortment. A. B. ALLEN & CO.,
[8-tf-o] 189 and 191 Water st., New York.

New York Agricultural Warehouse and Seed Store.

A. B. ALLEN & CO., 189 and 191 Water street, New York, have constantly on hand, the most extensive assortment of the best and latest Improved Agricultural and Horticultural Implements, and Field and Garden Seeds ever offered for sale in the United States; embracing every Implement, Machine or Seed desirable for the Planter, Farmer, or Gardener. Also, Guano, Bone Dust, Poudrette, Plaster, &c. [2-3t-o]

Emery's Seed Planter,

FOR Planting all kinds of Garden Seeds by hand, in drills or hills, and so constructed as to be equally well adapted for planting Corn, Beans, Peas, &c., in drills or hills, and may be instatly gauged to any quantity of seed, and the hills any distance apart, from three inches to eight feet.

The Planter is taken by the handles, and moved before the operator as a wheel-barrow. The Planter makes its own furrow, measures the quantity of seed, deposits it in the ground, and a coverer and roller follows, which completes the whole operation as fast as a man or horse can walk. When the rows are three feet apart, from eight to twelve acres are planted per day, or an acre per hour, with a precision not before attained by any other Planter we have seen. In large fields and long rows, a horse is usually attached.

It has been very widely introduced throughout the country during four years past, and with an increased demand,—our orders the last season exceeding all previously sold. Price, complete, $14,00.

PLOWS.

The Eagle Plows, in great variety of sizes, including some new patterns added the last season to the assortment, and calculated for extra deep Sward work, and for Stubble land, capable of turning under any loose stubble, &c., on the surface.

Besides the above, we have had made, expressly for our Trade, two New Patterns—one calculated for harrow and deep work for lapping furrows, of easy draft, and capable of doing the best of work; the other is for lighter broken land, and very well adapted to flat work, if desired—well calculated for one team of horses, and a very favorite Plow where introduced. Several hundred were sold the past season, of the latter, and in no case have they failed to give satisfaction.

To our assortment we have added the various sizes of the celebrated Plows of Messrs. Prouty & Mears, of Boston—some sizes of which received the Society's highest premiums, at the Plow Manufacturers Convention and Trial, in June last.

Also, Cultivators of various kinds, and for different field crops. Harrows of several kinds, including the Geddes and Scotch forms of all sizes.

Field Rollers of various sizes and kinds, including one of 30 inches and one of 24 inches diameter, made of cast iron sectons 15 inches long; as many sections are suspended on a two-inch wrought iron shaft as are sufficiet to make the length of Roller required, usually six feet long. Price 30 inch, 5 sections, with frame, &c, for use, $50; of 24 inch, 5 sections, $35.

All the above machines, together with a very large and complete assortment of the best selected and valuable Implements of Husbandry, to be found in any similar establishment in the country, (many of the leading articles being made immediately under our own personal supervision.) All are warranted to come fully up to the representation.

For further particulars, prices, terms, &c., see our Descriptive Catalogues, containing upwards of one hundred finely executed engravings of our leading implements, together with descriptions, uses, prices, &c., furnished gratis, on application or by mail.

Albany Agricultural Works, Warehouse and Seed Store, No. 369 and 371 Broadway. EMERY & CO
Albany, Feb. 1, 1851.

Fruit Scions for 1851.

THE subscriber will furnish Scions of the justly celebrated Fruit of Western New York, of the different varieties mentioned below.

Northern Spy,
Norton's Melon,
Early Joe,
Baldwin,
Ribston Pippin,
Red Canada,
Gravenstein,
Red Astrachan,
Lowel,
Dyer,
Porter,
Fameuse,
Yellow Bellflower,
Wagener,
Swaar,
Westfiela Seek-no-further,
Rambo,
Esopus Spitzenberg,
Roxbury Russett,
Autumn Strawberry
Green Sweeting,
Munson Sweeting,
Talman Sweeting,
Summer Rose,
Early Harvest,
Hawley or Douse,
St. Lawrence.

I will pack and send, at One Dollar per hundred, either by mail or express.

I refer to Mr. Vick, of the Gen. Farmer. All orders must come post paid.

Virgalieu, *Osband's Summer*, *Onondaga* or *Swan's Orange*, pear Scions, at Three shillings per dozen.

☞ In all cases where it is possible, I will send specimens of the *Northern Spy* apple. JAMES H. WATTS.
Rocheste, Feb., 1851.

1851 ROCHESTER 1851

STAINED GLASS WORKS.

I AM now prepared to produce upon Glass, the copy of any *Design, Picture, Figure or Ornament*, ancient or modern, Enamelled, Embossed, Painted or Stained.

Lead Sash, and Diamond Glass, for church or cottage windows, supplied to order. M. F. REYNOLDS.
February, 1851.

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To Fruit Growers and Nurserymen.

ELLWANGER AND BARRY solicit the attention of all tree planters, Nurserymen and Dealers to their present stock, which is much larger and better than they have ever before had the pleasure of offering.

It embraces, among other things, in large quantities,

Standard Fruit Trees, of all sorts.

Dwarf and Pyramidal Fruit Trees, for Gardens.

Gooseberries, Strawberries, Raspberries, Currants, &c., all the newest and best kinds.

Ornamental Trees, Shrubs, Roses, &c., including all new, rare and desirable articles.

Buckthorn, Osage Orange and other Hedge Plants.

Stocks of all sorts for Nurseries.

Green House, Border and Bedding Plants.

Double Dahlias, &c., in immense quantities.

Wholesale prices furnished when desired.

A new edition of the general descriptive Catalogue is now ready and will be sent gratis to those who apply post paid.

Mount Hope Garden and Nurseries,
Rochester, N. Y., Sept. 1, 1850.

Morgan & Wilson, Dentists,

OFFICE, corner of North St. Paul and Main streets, second story, beg leave to inform their friends and all those desirous of obtaining first class of operations upon the teeth, that they have again associated themselves together, and are in every way prepared to insert teeth on gold plate, from one to an entire set, or repair the decayed natural organs, with gold fillings, so as to preserve them during life.

To the Profession they would say, they have a large assortment of Alcock's Mineral Teeth, Gold Plate, Spiral Springs, and quantities of Morgan's Premium Gold Foil, constantly on hand.

Orders by mail filled at sight.

They can sell Teeth 30 per cent. less than they can be bought elsewhere in the city.

Specimens of their Plate Work can at all times be seen at their office.

☞ Just received a large stock of Alcock's premium gum and single Teeth, which they are selling at New York prices.

A. A. MORGAN. E. F. WILSON.

☞ Office, corner North St. Paul and Main streets.
Rochester, November 1, 1850.

GUANO.

WE are in daily expectation of arrivals of Peruvian Guano. Those wishing to order, will do well to do so at the earliest moment. A. B. ALLEN & CO.

New York Agricultural Warehouse and Seed Store, 189 and 191 Water street. [2-3t-o]

Two Farms for Sale in Fairfax County, Va.

WE ARE authorized to sell a Tract of Land in the county of Fairfax, containing 217 acres, about 30 of which is covered with timber, comprehending several varieties of Oak, Poplar, Hickory, &c. There is also a wood lot of 18 acres. Of the cleared land, about 100 acres is considerably improved, as is shown by the crops now on it. The orchard of about 12 acres, is most thrifty—the fruit various and select. The place is watered by a stream, the two branches of which are covered with timber for a mile or two above, and which, within the limits of the farm, has a fall of 17½ feet clear, being amply sufficient for a saw mill during seven or eight months of the year, and would suffice for a family grist mill The buildings consist of a dwelling house containing six comfortable rooms, besides the garret, two cellars, a store room, kitchen, servant's room, &c.; a comfortable farm house sufficient for the manager's family and the farm laborers; also a large new frame barn, 58 by 32 feet, with 16 feet posts. This farm is about two miles from the Falls Church, eleven miles from the city of Washington, ten miles from Alexandria, and 8 from Georgetown, by the nearest road. It is well watered and remarkably healthy.

The second Tract contains 167 acres, and is situated two miles east of Fairfax Court House, Va., and about equal distances from the cities of Washington, Georgetown, and Alexandria, viz., fourteen miles. There is about 50 acres of timber upon this tract, and about 20 in small Pines and scattering forest trees, the balance being nearly cleared and in good condition for cultivation. It lies in a desirable part of the county, and on the line of a proposed plank road, in a direct line from Fairfax Court House to Georgetown. The dwelling house is comfortable, and a good milk house and other out buildings are on the place, a good well of water at the door, and the farm well watered otherwise; with an abundant supply of good fruit, such as apples, cherries, peaches, &c. The land is divided, unequally, into nine lots, fenced with rails mostly new. Adjoining this tract is a new and improved saw mill, at which there is a market for all kinds of lumber. Any person visiting Fairfax Co. will find it to their advantage to call on the subscriber, when they can be informed of other tracts if either of the above did not suit.

For further particulars apply personally, or by letter, to the undersigned, at Fairfax Court House, Va.

Letters directed to "Fairfax News," Fairfax Court House, Va., postage paid, will recive a prompt reply. H. FULLER.

Fairfax Court House, Va., Sept. 21, 1850. THOS. R. LOVE.

School of Applied Chemistry, Yale College, New Haven

JOHN P. NORTON, PROF. OF SCIENTIFIC AGRICULTURE.

STUDENTS are received in this Laboratory as a special class, distinct from the other College departments, and instruction is given in all branches of Chemistry, both organic and inorganic, general and special.

Every facility is afforded to those who desire to study Scientific Agriculture generally, or the analysis of soils, plants, animal substances, manures, &c. Students fitted to become instructors in this branch of science.

A course of Lectures, upon Scientific Agriculture, by Prof Norton, will commence about the middle of January, and continue two and a half months. This course is intended to present a plain and intelligible view of the connections of Science with Agriculture, which may be understood by any farmer.

The Lectures of Prof. Silliman on Geology and Mineralogy, and those of Prof. Olmsted on Nat. Philosophy, Astronomy and Meteorology, also the College Libraries and Cabinets, are accessible to the students.

For information as to terms, &c., apply to Prof. Norton.
Nov. 1, 1850. [11-4t]

The Practical and Scientific Farmer's Own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, Fruits, &c.

VOLUME XII. FOR 1851.

DANIEL LEE & JAMES VICK, Jr., Editors.
P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

Five Copies for $2; Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ Post-Masters, Agents, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post paid or free,) at the risk of the Publisher. Address to

DANIEL LEE,
Rochester, New York

December, 1850.

STEREOTYPED BY JEWETT, THOMAS AND CO., BUFFALO, N. Y.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—MARCH, 1851. NO. 3.

THE BREEDING AND REARING OF DOMESTIC ANIMALS.

THE farmers of the United States possess every advantage to excel in the breeding and rearing of domestic animals. They have an abundance of land for tillage, meadow, and pasture; and climates admirably adapted to the production of grass, roots, and grain. Horses, mules, neat cattle, sheep, and swine, are healthy, sufficiently long-lived, and profitable, when skilfully managed. In nearly one-half of the States, a good mule is worth $100, and an ordinary one of fair size is worth $70; while the cost of rearing until he is three years old, is no more than to keep a steer to the same age. As a mule will perform hard labor twenty-five or thirty years, or more than twice as long as a horse, particularly at the south, the demand for these field servants keeps pace with the wonderful consumption of calico, shirting, and other cotton fabrics. Mules are wanted for growing tobacco, which two-thirds of the men, and boys over ten years old, either chew or smoke, or both, every day in the year. For the culture of corn, as well as sugar cane and rice, mules are much preferred to horses; the latter, however, sell high in the southern States, for carriage use and riding. The wife of almost every planter who is doing well, keeps her carriage and a pair of horses worth from $200 to $500; and every son and daughter big enough to ride, wants a saddle-horse besides. As population and wealth increase throughout the country, the de[illegible] for fine animals of all kinds augments in an [illegible] if not a greater ratio. Ordinary cows sell in [illegible]orgia at from $6 to $10 a head, extraordinary ones [illegible]ing readily from $50 to $150 each. We saw a [illegible] cow sold at the latter price at the State Fair in 184[illegible], not so good as we have bought in Erie county for $13.

No other department of rural industry pays so well at this time as the breeding and rearing of superior stock. This is a branch of business which nearly every farmer thinks he understands perfectly, but after all, the results of his practice prove that he is mistaken. A large share of the best stock imported into the United States has deteriorated from the carelessness or ignorance of those into whose hands it has been committed. Until the art and science of breeding and keeping domestic animals are more generally studied, and more highly esteemed, the number of first rate horses, mules, neat cattle, sheep, and hogs, will be comparatively small. We have recently estimated, in a public document, the number of horses and mules in the country at six millions, and we are confident that their average value might be increased, by a course of skilful breeding, in a few generations, $30 a head. This would be equivalent to creating a capital of $180,000,000. A horse or a mule worth $90 dollars is as easily kept when reared, as one worth but $60; and the same rule applies to the rearing and keep of swine, sheep, steers for the shambles, working oxen, and dairy cows. The farmers of Belgium and Holland make more beef, according to the area under cultivation, than is produced elsewhere in Europe, and they market most of their cattle before they are three years old. Every calf designed for meat, should be ready for the butcher by the time a thousand days have passed over its head; and it should never form less than a pound of good meat in twenty-four hours, for its owner.

How can a farmer use the digestive organs of a calf 1000 days to the best advantage? An engineer is required to study every part of the machinery under his control. He must be familiar with the building and strength of each tube, valve, cylinder, and joint, in the most complex steam engine, to work it with the largest profit. What is a calf, colt, pig, or lamb, but a small locomotive in the hands of an agricultural engineer? How few engineers of this class have carefully investigated the nature and strength of the complex machinery which elaborates milk, butter, cheese, wool, meat, or produces the valuable physical powers of the ox, mule, and horse? The time has come when the anatomy and physiology of these wealth-creating animals should be universally understood. Their internal organization and external symmetry, their intrinsic value and productiveness, as well as beauty, can never be fully appreciated before science enlightens the understanding of the stock-grower. That all kinds of food in all sorts of conditions may be given to cattle, sheep, and hogs, with equal benefit and profit, no one pretends; but when we presume to say how animals shall be fed, and what they should consume, there are almost as many opinions as farmers. Where butter is high, and calves are reared on skim-milk and butter-milk, experience in Europe has confirmed the teachings of science, that molasses, used to sweeten milk deprived of its butter, is the best substitute in the system of the calf. Bread and sweetened water may not be so nutritious in the stomach of a growing child as bread and butter, but it is better than bread and pure water.

Both molasses and sprouted barley have been successfully used in England in fattening bullocks and feeding milch kine. Many say that to malt barley sufficiently to develop its saccharine properties, increases its fattening powers, perhaps by rendering all its starch, gluten, and other protein compounds more easily digested.

Who has ever spent a dollar to learn what part of the nutritive matter that enters the stomachs of his horses, cattle, and hogs, passes through their systems undigested? Who can say how much is wasted in generating extra heat, by reason of the fact that animals are exposed to severe cold and storms in winter? All experience confirms the statement that, in a degree, external warmth is equivalent to food. The living locomotive must have a given degree of internal heat, or all the machinery stops forever. The heart ceases to beat, and the lungs to inhale a single breath, if the fire within or the solar warmth without be too feeble for the purposes of life. A comfortable degree of external heat united with proper ventilation, for the benefit of all bipeds and quadrupeds, is a matter of universal interest. Warm houses, barns, stables, and pig-pens, with an abundance of good food, and that skilfully prepared and economically consumed, are points often overlooked even by intelligent persons. The keep of animals governs their gradual improvement or certain deterioration. Attentive and proper feeding, with the judicious selection of males and females in propagating any race, constitute the cardinal points in stock-raising. One should be careful to provide a plenty of pasture, and that fresh and sweet, for consumption in spring, summer, and autumn, and a plenty of well cured forage for winter. Pastures and meadows have been sadly neglected, and their failing productiveness has attracted our attention in all the States we have visited, which are not a few. They greatly need a liberal covering of stable manure, re-seeding, and a good scarifying with a sharp harrow. Many need draining, and still more irrigation, which adds wonderfully to the growth of grass and the improvement of grazing and meadow lands. Water in springs, brooks, and creeks, abounds in the mineral and organic food of plants; and in thousands of ravines, dams and ditches may be cheaply constructed, to turn it over extensive fields.

The soiling of cattle is gaining in public favor every year where it is tested by experience. By feeding stock in small enclosures, a large share of the fence now required in this country, may be dispensed with — an object of no inconsiderable importance. All good farmers recognise the necessity of either making or purchasing an annual stock of manure; and with this they can cut grass, clover, corn, or other forage enough from an acre to keep one and perhaps two cows the year round. The droppings of horses and cattle on pastures, while feeding, are found to be of little value; too much manure is applied at one place, and none at all over many square yards. Sheep distribute the raw material of crops more evenly, but not so well as it can be done by the husbandman. Stock-growing, manure-saving, and the economical production of grain and grass, must be blended into one system of tillage and husbandry. Much of the manure now manufactured is poor stuff, and really not worth over half of what it costs. Not a little trash is hauled ten miles out of the city of Washington, to fertilize poor soils, which is of as little value for manure as a load of pine chips.— Good manure is worth its weight in timothy hay, and often its weight in corn. The science of producing manure is quite as important as that of transforming grass, grain, and roots, into meat, milk, wool, and the flesh of horses and mules. The best manure sold in Washington brings four dollars a barrel, and it is worth that to make into wheat at a dollar a bushel. This fertilizer comes from the Pacific, on the coast of Peru, and from small islands covered thirty feet deep with guano, which is there estimated at thirty millions of tons. Manure of equal value per cwt. can be made at home, provided farmers will give instructions to their legislators to foster agricultural science.

As a general rule, it is safe to say that one-third, if not one-half, of the fertilizers voided in stables and barn-yards, are never carried out upon the fields whence the crops that fed the animals were taken. To waste manure and impoverish land, is not the way to produce cheap beef, pork, butter, cheese, and wool, for any considerable number of years. The manure of a fattening pig is worth nearly half as much as his food, provided one knows how to use it to the best advantage. Meat sells at about the same price in Belgium that it does in the State of New York, and of course grass is worth about the same. The manure of a cow in Belgium is often sold at from $12 to $15 a year. How can this raw material of crops and beef be more valuable there than here, provided our crops and beef fetch as much per 100 lbs. as theirs do? They send vast quantities of meat to London, and so do we, more or less. The truth is, we have yet to learn the money vaule of good manure, the art of saving it *all*, and the economy of selling fat heifers and steers when two years old, and fat pigs when from nine to twelve months old. A calf can extract more meat from 100 lbs. of oat, corn, or barley-meal, well cooked, by 40 per cent., than a six year old cow or ox can. Pea and bean porridge for pigs and calves, will make them grow rapidly, and are much used for that purpose on the continent. One that has a plenty of rich manure can make cheap oats and corn for feeding all domestic animals; and if these are the best, they will pay a round profit.

Too little attention is paid to the saving and liberal use of grass seed by dairy-men, wool-growers, and such as make a business of rearing horses, mules, hogs, and neat cattle. After all that has been said about making two blades of grass grow where only one grew before — a proverb older than the time of Jacob, in all probability — the neglect of grazing lands is a prominent defect in modern husbandry. Go where you will, and you shall find mean cattle, hogs, sheep, and horses, where pastures and meadows yield little food for domestic animals. To pay high prices for improved breeds, and then run them down in size, form, and value, by injudicious keep, is the height of folly. Hence, instead of commending Short Horns, Herefords, Devons, Ayrshires, or any other race, we content ourselves with urging the necessity of providing an abundance of food, adapted to the constitution and habits of the animal, which may be regularly consumed every day in the year. Sheep that have a feast three or six months and are then half starved an equal length of time, never clip even wool. The staple is materially affected by all changes of this kind; and every dairyman knows that to give cows only half allowance ten days in June, will diminish the yield of milk, butter, and cheese, for six weeks thereafter. Many interesting experiments on this point have been tried in Europe, the results of which are highly instructive. The transformation of grass, roots, and grain, into milk, meat, and wool, is now treated of as a branch of *manufactures*, in which labor and capital must be vastly more concentrated, to give the highest attainable profit. Instead of being so anxious for an illimitable "range for stock," as western and southern growers demand, bring the whole operation into a narrow compass, and add four-fold to the natural productiveness of the soil, and at the same time make one animal worth three or four common ones.

WHEAT-CULTURE IN THE GENESEE VALLEY.

In commenting on Prof. Johnston's description of American agriculture, the editor of *The Plough, the Loom, and the Anvil*, has this paragraph:

> We should have been surprised too, to learn what he avers, that in Genesee, "where the land is [we suppose he means naturally] more fertile than in any part of Great Britain, they were laying their lands down to grass because they *can not afford to grow wheat*." We should, we say, have been a little surprised at the annunciation of the fact as to Genesee, had we not been so recently told by the Hon. Willoughby Newton, in his admirable address at Baltimore, that "the Genesee valley has fallen in production *from twenty-five to ten bushels of wheat per acre*."

We often meet statements similar to the above, in our exchange journals, and the opinions therein expressed prevail very generally in distant States. Had Mr. Newton reversed the story, and said that the oak-barrens "in the valley of the Genesee," and especially in the towns of Wheatland and Caledonia, which in a state of nature produced only ten or twelve bushels per acre, have been so improved by good husbandry as to yield crops twice as large, or nearly twenty-five bushels per acre, he would have come very near the truth of the case. There are but two wheat-growing counties, properly speaking, in the Genesee valley, viz: Monroe and Livingston; and we hazard nothing in saying that no other two contiguous counties in the Union will show, by the U. S. census, equal crops of wheat, although the valley of the Genesee has been forty years under the plow and harrow by excessive tillage. Monroe county beat the Union in 1840, and will do it again, although there are many larger counties. Her closest competitors are in Western New York and Ohio.

While defending our friends from the charge of having so exhausted their lands that they can "no longer afford to grow wheat" upon them, they will permit us to suggest the propriety of taking a crop of wheat once in four, instead of two or three years, from a field. By taking pains to fertilize the soil through the agency of clover, gypsum, and manure, three crops of an average of 33⅓ bushels per acre may be harvested in twelve years, or 100 bushels in that length of time. Now, if you sow this land six times to wheat in twelve years, neglect manuring as you will, and lose all the pasture and hay that will grow in three years, lose the extra tillage, extra seed, and extra harvesting; after all, you will reap only 100 bushels of wheat, being an average of 16⅔ bushels per acre, for each crop. This last system is the sure way to impoverish arated land; because much of the organic and inorganic elements of crops, which tillage renders soluble and rains actually dissolve, flow with surface and spring water into creeks, the river, and lake Ontario. Keep land in grass or clover three years in four, and carefully save all the liquid and solid manure which the grass and hay yield, whether consumed by sheep, cattle, swine, or horses; and while your wool, pork, beef, and young horses, will bring a fair profit on their cost, your crop of wheat on the four year rotation will equal two ordinary crops, and be produced at the minimum expense per bushel. In this way you can keep double the stock, sell butter if you prefer it to wool, have your farms in first rate condition, and *increase* instead of diminishing your annual harvest of wheat.

Too little attention is paid to meadows and pastures—to making manure from the hay that may be cut by draining swamps, marshes, and swales, so that herds-grass, timothy, blue-grass, and English ray-grass will flourish on these low, wet places. We well remember many such unprofitable places, unsightly wastes, in Monroe and Livingston counties. A great deal of the cream of uplands now devoted mainly to wheat-culture, has been washed into these basins of variable extent and depth. Make this cream into grass, the grass into manure, and the manure into corn and wheat. By this operation, not only your wheat and corn crops may be doubled, but a double growth of clover in pastures and meadows may also be realized. It is not more land, but more skill and more science that you need, although we have long maintained that the readers of this paper in Western New York are the best farmers to be found in the United States. Many of our friends from the south will visit you at the next State Fair, and we have no apprehension that all we have ever claimed for the valley of the Genesee, will not be conceded as true to the letter and spirit of our commendation.

Mr. Newton, whose remarks we have copied at the commencement of this article, paid $1000 for guano, last fall, to put on his wheat at the time of seeding. He says that on a farm recently purchased he will harvest as many bushels of wheat next season, with ordinary luck, as it cost him dollars. He is a Virginian, and applies 200 pounds of guano to the acre, which gives an increase in the crop, beyond what the soil would do without the manure, of some ten or twelve bushels. That is to say, 600 pounds of wheat are the product of 200 of manure. Some of our Genesee friends in Monroe and Livingston will remember how often we have called their attention to the interesting fact, in public lectures, that a barrel of flour of 196 lbs., contains 187 lbs. of carbon and the elements of simple water, the other 9 lbs. being nitrogen and incombustible earthy matter. Mr. Newton has paid four dollars a barrel for manure to apply to his wheat crop, and found it to return a good profit. Rely upon it, there is something in the growth of wheat and in the chemical composition of manure, not sufficiently understood by most wheat-growers. In England, where both fertilizers and grain-culture have been investigated with extreme caution, every pound of ammonia in guano is estimated at six pence sterling, or eleven cents our money, calling wheat worth five shillings. Phosphate of lime is worth three farthings a pound, and potash about a penny more than in this country.

Rochester can easily furnish the raw material to form 300,000 bushels of wheat a year, so far as it is lacking in the surface of the earth. It ought to be a model city, surrounded by a model farming community—both co-operating to carry back in fertilizers, and bury in cultivated soils, every thing that will render either the atmosphere or water of the city impure and pestilential. The same dissolving elements of human food that poison the air and water consumed by the denizens of a city, will form the cheapest wheat, corn, and potatoes, a farmer can grow. Both parties must labor together, and for a common purpose, if both would prosper.

A FEW SUGGESTIONS FOR THE N. Y. STATE AGRICULTURAL SOCIETY.

This Society stands at the head of all agricultural progress in America. It occupies a proud and enviable position, and if true to itself and the great cause to which it is devoted, its distinguished friends will be remembered with honor long after mere politicians, whether Governors or Presidents, are forgotten. It labors not for the things of a day, but for interests that will be as fresh and commanding a thousand years hence as they are at the present moment. The ministers of the enlightened nations of Europe, at Washington, seek copies of its Transactions as a work of rare value, for the instruction of the friends of agricultural improvement in their respective countries. We have just given our last copy to Sr. Von Geralt, Minister Resident of H. M. the King of Prussia, who takes a deep interest in all our agricultural organizations. If the Executive Committee of the N. Y. S. Society will place a dozen copies of its Transactions at our disposal to go abroad, it will enable us to secure valuable contributions to its Library—an object of no inconsiderable importance. We are happy to say that Mr. Webster enters cordially into the policy of advancing American agriculture, by obtaining through our representatives at foreign courts, and consuls in all commercial cities, whatever seeds, cuttings and books may contribute to the promotion of rural arts and sciences in the United States. As our national ships visit every port, their officers, without inconvenince, can bring home any thing which may be useful and desirable, free from charge. American seamen are particularly interested in having the provisions on which they subsist for months in the tropics, as well put up in this country as in any other—a thing not now done.

What is there to prevent the N. Y. State Society obtaining 1000 life memberships at ten dollars each, under the new fee, and applying the $10,000 derived from that source to the purchase and equipment of an Experimental Farm? There is not now such a farm in America, and the honor of putting the first in complete operation, would be equally great and enduring. Unless the leading men in that Society move soon, the State Societies of Ohio, Michigan, Maryland, Georgia and Kentucky will take the lead in this important matter. The Kentucky Agricultural and Mechanics Association held its first Fair last October, and it has already raised and invested *eight thousand dollars* in twenty-five acres of land and buildings.

A little well directed effort in the State of New York, (which has some 265,000 more people within its limits than all New England,) will command $10,000 for the purchase of a small farm of one hundred acres, and a few animals of the best breeds to stock it, as well as all needful implements of husbandry. New truths in rural science and practice, can only be elicited by the agency of new operations. Farmers may go on stepping forever in the same tracks, like a horse on a tread-wheel, without advancing in knowledge a particle; but is it creditable or desirable to vegetate in that way? The time has come when the true powers of different kinds of soils and manures should be tested in the most exact and satisfactory manner. So too the precise value of diffent kinds of food for dairy cows, sheep, hogs, horses, and oxen, should be universally known. The annual additions made to our professional knowledge are small indeed. They can be doubled and trebled, if we will only make a common effort in the right direction. Next to nothing has been done in this country to unite the best practice with the best science on the same farms. In Europe, art and science are studiously brought together to tmprove the soil, domestic animals, and, particularly, young men devoted to the profession of agriculture. We must experiment in fifty different ways, if we would develop new facts relating to rural affairs; and the plan of such experiments must be laid down by some one familiar with all the light that science has already given to the subject. Manures are destined to become as much an article of inland and foreign commerce, as cotton, tobacco, breadstuffs, and provisions. Hence their concentration, (like guano,) and skilful manufacture, are objects of vast national importance. The great truth that one hundred pounds of manure can produce three hundred of good wheat on such poor, exhausted lands as abound in Maryland and Virginia, is no longer questioned. The economical production of artificial guano, equal to the best Peruvian, is a desideratum which ought not to be overlooked by the officers of the N. Y. State Agricultural Society. They have the position and means to do an incalculable amount of good; and the farming community will hold them to a strict accountability for the "ten talents" committed to their care, for a wise and profitable investment.

MAPLE SUGAR.

Those that intend making a crop of sugar from the "sugar tree," have no time to lose in getting everything ready for tapping the trees, hauling and evaporating the sap. Buckets or troughs are indispensable to catch the "sugar-water" as it flows from the cut in the sap-wood, and these often need cleansing and repairing. It is not every youth that can go into the woods, cut his timber and hoop ten, twenty or a hundred sap-buckets; and, as a general thing, it is best to employ a cooper to do the job. To make troughs is a somewhat less difficult undertaking, provided one has trees of the right size that are free-rifted and split well through the heart. We have had some experience in making troughs, hooping buckets and large tubs for storing sap, and know that good timber is the important part of the operation. The complex and beautiful machinery that manufactures water pails, keelers, and wash-tubs, so rapidly, would be just the thing to work almost any soft wood into convenient vessels to hold sap, as it flows from the trees. Assuming that one has a supply of good clean troughs or buckets, a reservoir at his works perfectly tight for holding one or two days' run of the bush, he should then provide a horse or ox-sled rigged with a sixty gallon cask, (this is large enough for a single horse, a pair of oxen or horses can easily haul a much larger one,) for gathering the liquid which is to yield the sugar. A cask with two heads entire, fastened to the sled and having a large funnel made of a bucket which will hold a pailful, placed over the bung to receive the sap, as it is taken from the trees, is the best contrivance. Fair roads should be cut all through the sugar orchard, if it be not completely under-brushed: and when a load of sap is brought to the camp the reservoir should stand a little lower than the sled, so that by pulling a plug, or turning a faucet, all the sap in the hogshead on the sled will run without labor into the storage tub near the evaporating pans or kettles. To carry sap in buckets on one's neck and shoulders with a yoke, as many a reader has done, through deep snow, seems very much like hard work.

That side of a tree which has the larger part of the top, and grows most thriftily, with the biggest roots, will yield the most sap, if properly tapped. If one begins early, the south side is best, other things being equal; if late, the north side should be preferred. There are many facts pertaining to the flow of sap, which are involved in much obscurity, such as the influence of the wind, sunshine, freezing at night, &c., that somehow modify the ascent of liquid, and, perhaps, the descent, in the vascular system, and the evaporation of water at the terminal buds. Where the sugar comes from, and how it is formed, are quite as curious studies as the way in which its circulation is kept up before the tree has any leaves to aid in the operation.

We are not disposed to enter into either a physiological or chemical discussion at this time, but aim to give a few practical hints on sugar making. As in the dairy business, one's kettles and utensils of every name should be perfectly clean and sweet, and the syrup should be settled ten or twelve hours before it becomes molasses, to remove all fine particles of dirt which no cloth strainer can seperate. This, with judicious skimming, will give pure sugar, which can be farther whitened by percolation, if desired.—As the trees that yield this delicious sweet are cut down, and fine maple sugar and syrup become scarce, the price advances and their manufacture becomes more of an object. We have seen a good many tons of good maple sugar sold at five cents a pound; and it was once thought a liberal price, when wheat brought but thirty and forty cents in Western New York.

Instead of having to dip cold sap into boilers, it is much better to have a small stream constantly running from the reservoir into the kettles just equal to the liquid driven off in vapor. In this way there is little danger of the syrup boiling over and being wasted, or burning on the sides of the kettles, and no time is lost in bringing the liquid up to the point of ebulition. To decide when the sugar is evaporated enough to cake well, is a matter that experience alone can teach. A plenty of dry wood, a comfortable house, kettles well set in an arch, with conveniences for filtering and settling syrup, and "sugaring off," are all points not to be overlooked where the business is prosecuted to any extent. From 8,000 to 10,000 lbs. are the largest quantity that we have ever known manufactured in one orchard in a season. Mr. MARTHER, of Fairfield, Herkimer county, N. Y., formerly, (about thirty years ago,) often realized $1,000 for his sugar crop; but of late years, the saccharine matter of sugar cane has nearly driven that of the *acer saccharinum* out of the market. Land that bears a fine growth of rock maple is usually valuable for tillage, meadow and pasture; and unskilful tapping, in a few years, will nearly destroy any tree.

* * *

SUCCESS is the child of courage and perseverance.

CORN-GROWING.

MESSRS. EDITORS:—I have a desire to communicate to you, and through the medium of your valuable paper to others, the method I have successfully practiced in growing corn for several years past—not that I claim to have made any important discovery in its cultivation, but simply to have combined and practised the experience and recommendations of men wiser and more experienced than myself. The soil that I have tilled is a gravel loam. I have usually, for corn, turned over in the month of April, or early in May, a clover sod, by plowing carefully and deep—a little deeper than ever before plowed. I have spread the manure upon the ground before plowing. I dig up the grass around the stumps and then thoroughly harrow until the surface is well pulverized and mixed. To mark the land for planting, I have used a light pole about thirteen feet long, twelve feet of which is divided into three equal spaces, four feet apart, (the distance I have between the rows) and to it I attach, by means of ropes, four pieces of chains which I have found to make the best marks to follow in planting. Two men or boys, by each taking an end of the pole, can mark both ways ready for planting, several acres in a day. The benefit of thus marking I have found to be saving of time, straighter rows, and a uniform distance between them, and also the entire independence of the planters of each other, so that boys who can plant only a part of a row and keep up, can do so correctly. I grow the large dent corn which is adapted to this climate. Four kernels are usually dropped in each hill and slightly covered with not more than two inches of earth. As soon as the corn has come out of the ground so as to be seen and follow the rows, I prepare a composition by mixing equal parts of slaked lime, ashes, and plaster, of which about a gill is dropped upon every hill of corn, and which is quickly done by suspending a pail or other vessel across the shoulders by a strap of leather or rope, walking nearly erect, and with a small shingle dip out of the vessel and throw it upon the growing corn. Should the leaves be open and the prepation drop into them it does not injure the corn. I have found this composition thus applied, to cause the corn to grow rapidly and vigorously. And also what to me has been a great benefit, crows have never pulled up any after its application, although they had began to pull before. As soon as the rows could be easily traced, I have gone between them with a horse, and a cultivator so constructed that all the earth was moved and cleaned of whatever was growing, thirty-five inches wide. The cultivator has flat teeth shaped like a common flat-iron, with a shank from the wide end eighteen inches long, and fastened on the top of the frame by screws and nuts. I have found that passing once with it has been as effectual as twice with any cultivator I had previously used. After passing both ways through the corn as above mentioned, I leave it till about the first of June, when I again go through the field in the same manner, and then thoroughly clean the hills with the hoe and hand, leaving the ground level. About the first of July I again clean the hills, after having been through as often as necessary with a horse and cultivator. The average yield per acre, in favorable seasons, when harvested, has been one hundred, or more, bu. good sound ears of corn. The cultivator is gaged by a wheel so that it can be used without disturbing the sod. The benefits of level culture I have found to be that corn resists the winds better, extends without interruption its innumerable fibrous roots all through the earth so near the surface that they derive every benefit from heat and moisture. I have often dug between the hills when the corn had attained nearly its growth and set for ears, without finding any space that the roots did not occupy. I had designed to have written more but my article would be too long. ORANGE H. WAIT.—*Willoughby, Ill., Jan.*, 1851.

BUTTER AND CHEESE MAKING.

MESSRS. EDITORS:—I saw, in the October number of the Farmer, certain questions from the Commissioner of Patents, and a request that farmers would answer them. Living, as I do, on a farm almost new, and under rather a poor state of cultivation at that, I can not expect to furnish much information of importance; but such information as I am able to give, is at your service. My business is dairying, and what I have to say is connected with that branch of farming.

I find that my cows, thirty-six in number, have averaged of cheese for market, 280 pounds; and of butter, 48 lbs. each; besides what the family have used, which I estimate for the whole year at 600 lbs. of cheese and 500 lbs. of butter. Average price of cheese, 4 cts. 6 mills per pound; and my butter I contracted in the spring, at 12½ cts. the season through, which has been the highest price until within a few weeks. My cows have had nothing but grass, and short picking at that most of the time, owing to drouth and grasshoppers.

With regard to the comparative difference of making butter *or* cheese, I am not able to state; but the difference between making butter *and* cheese will appear by comparing the results of the following experiments:

EXP. 1. Milk skimmed and churned while sweet, and the butter-milk worked into the cheese. Milk, 720 lbs.; butter produced, 25 lbs.; curd, 79 lbs.; cheese from press, 60 lbs.; cheese ready for market, 55½ lbs.

EXP. 2. All the cream worked into the cheese. Milk, 822 lbs.; curd, 111 lbs.; cheese from the press, 92 lbs.; cheese ready for market, 86 lbs.

EXP. 3. Night's milk set in vat, skimmed in the morning, churned, and butter-milk worked into the cheese. Milk, 771 lbs.; curd, 100 lbs.; cheese from press, 79 lbs.; cheese ready for market, 74 lbs.; butter, 11 lbs.

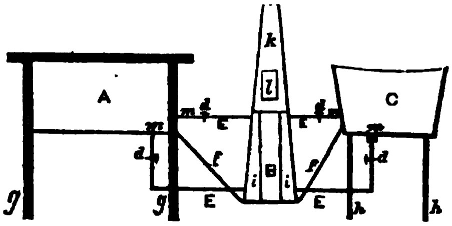
By the above you will perceive that I get more pounds of butter and cheese than of cheese alone, from the same quantity of milk. In each experiment, the milk was weighed as soon as milked.

My method of making butter has been this: In warm weather I put ice in the cream until it is cooled to a proper temperature—say, when the air is 70° or 80°, I cool the cream to 45°; when the atmosphere is from 55° to 70°, I cool the cream to 50°; and when the atmosphere is below 50°, I warm the cream—more as the weather is cooler; but in no case should it be warmer than 55° when the butter comes. In spring and fall I scald the milk when it first comes from the cow; *i. e.*, heat it to 125° or 130°: this makes it keep longer before souring, I get more cream, and it churns much easier, besides it removes all bad flavor caused by the cows eating vegetables such as leeks, ruta baga, &c.

After butter is churned I work all the milk out that I can, with a paddle, and then work in about 1 lb. of good salt to every 20 lbs. of butter. I then put it in a cool place—if the weather is warm, I put it in a tin pan and set it on the ice in the ice-house until the next day, when I work it thoroughly with the hand, being careful not to warm it so as to make it oily, and then pack it down solid in air tight packages, and keep it in a cool place. Butter made in this way has the *reputation* of being the best in market.

My method of making cheese is to warm the milk to 88°, and then add sufficient rennet to "fetch it" (as the old dairywomen say,) in about 40 minutes. I then cut up with an instrument made with a steel frame and strung across with fine brass wire. I then commence heating it slowly, stirring it all the time to prevent its sticking together, until I heat it to 108°, when I turn the heat off, cool it a little, and let it stand about half an hour. I then drain off the whey and put in 1 lb. of salt to every 20 lbs. of cheese from the press, and then put in the press.

Perhaps some of my remarks may be rather unintelligible without a description of my apparatus for making cheese. I hardly know how to describe it without a drawing. I will give you a vertical section, and by that means describe it as well as I can.



A, vat of wood, with metalic vat inside. B, heater, 7 inches in diameter inside, 12 inches at bottom, 8 inches at the top on the outside, and 14 inches high. *i*, *i*, space between outside and inside, which, by means of pipes, E, E, E, E, bolted to tub and vat (C, A,) at *m*, *m*, *m*, *m*, is kept filled with water which is heated by fire inside the heater B. As the heated water rises, it passes off in the upper pipe, and its place is supplied by cold water through the lower pipe. *k*, stove-pipe with door, *l*, to supply heater with fuel. *d*, *d*, *d*, *d*, connecting cocks, by means of which the heat may be thrown either way. *f*, *f*, rods of iron to support the heater. *g*, *g*, posts to vat. *h*, *h*, posts under tub. A. BARTLETT.—*Fowler's Mills, O., Dec.*, 1850.

EXPERIMENT ON POTATOES.—In the spring of 1847 I planted potato seed in drills, it grew, and I transplanted one plant, hoed it often, and the produce was about half a pint. In the spring of 1848 I planted the produce of the one plant, and in the fall I dug one bushel of beautiful potatoes, the largest two weighing 19 and 20 ounces. I have planted seed from the ball four years in succession, and have produced some new and excellent kinds that I never saw before. I have experimented on potatoes more or less for twenty years past, in Warren county, Pa., and think that they do best of late years, when planted very early, on quick, warm soil. I have some old potatoes raised in 1849, which I intend keeping to experiment upon in 1851. SAMUEL BARTON.—*Pittsfield, Pa., Dec.*, 1850.

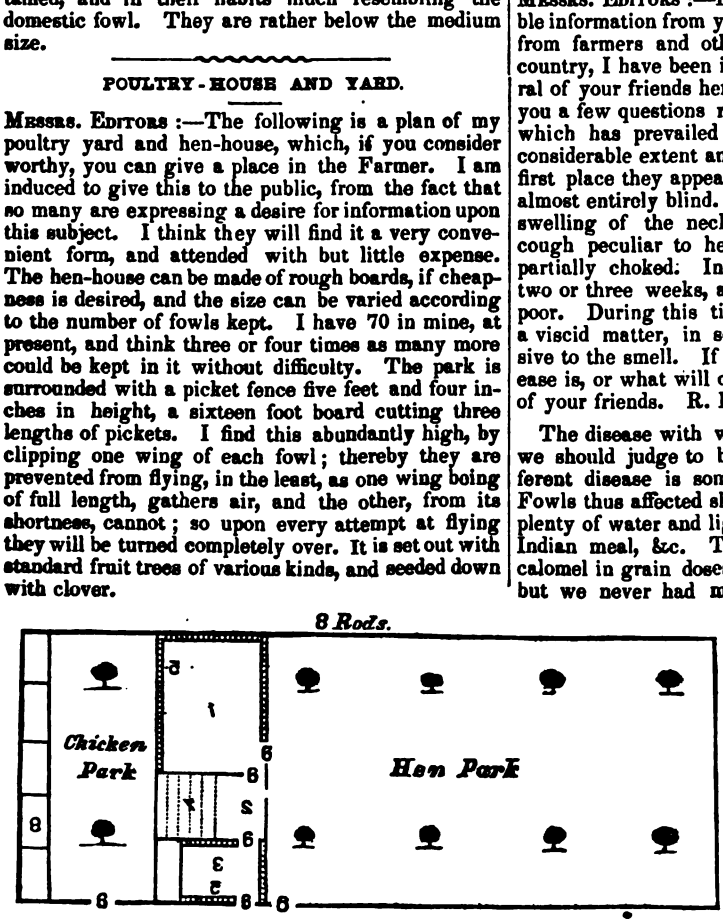
The Poultry Yard.

SONNERAT'S JUNGLE FOWL.

Sonnerat's Jungle Fowl is found wild in the Jungles of India. It is contended by some that to this species alone are our breeds of domestic fowls to be traced. They are represented as being very easily tamed, and in their habits much resembling the domestic fowl. They are rather below the medium size.

POULTRY-HOUSE AND YARD.

Messrs. Editors :—The following is a plan of my poultry yard and hen-house, which, if you consider worthy, you can give a place in the Farmer. I am induced to give this to the public, from the fact that so many are expressing a desire for information upon this subject. I think they will find it a very convenient form, and attended with but little expense. The hen-house can be made of rough boards, if cheapness is desired, and the size can be varied according to the number of fowls kept. I have 70 in mine, at present, and think three or four times as many more could be kept in it without difficulty. The park is surrounded with a picket fence five feet and four inches in height, a sixteen foot board cutting three lengths of pickets. I find this abundantly high, by clipping one wing of each fowl; thereby they are prevented from flying, in the least, as one wing boing of full length, gathers air, and the other, from its shortness, cannot; so upon every attempt at flying they will be turned completely over. It is set out with standard fruit trees of various kinds, and seeded down with clover.



1, Laying room. 2. Roosting room. 3, Breeding or sitting room. 4, Bins for grain. 5, Boxes for laying and sitting. 6, Doors. 7, Poles for roosting. 8, Little sheds for chickens.

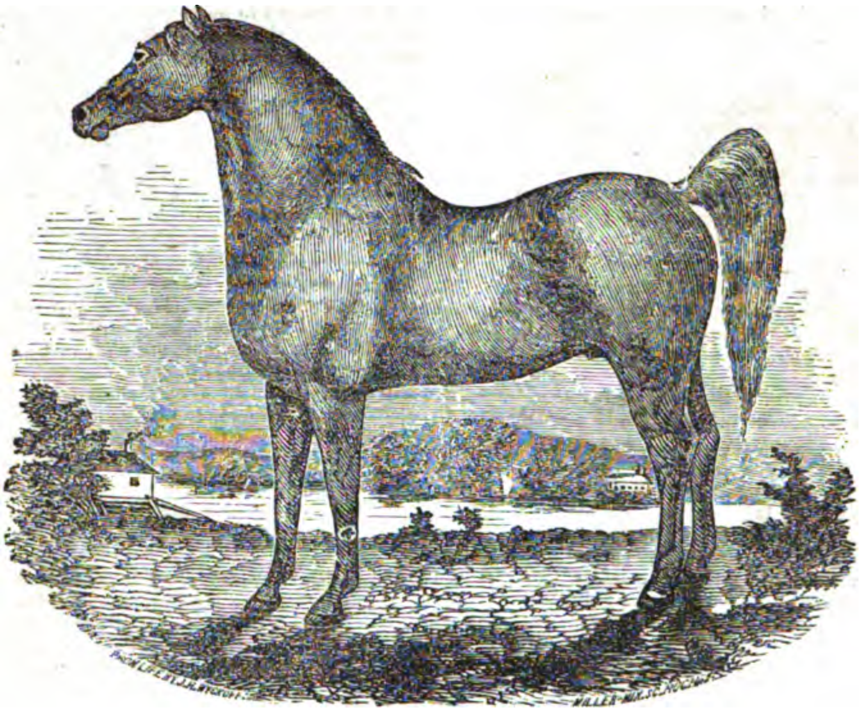
I was induced to make this division, as seen above, on account of the difficulty of sitting my hens, while among those that were laying. When a hen attempted to sit, every hen in the yard appeared determined to lay in no other nest, thus preventing them from having that quiet so necessary during incubation. When I attempted to force them to sit upon a nest, which I would make in some convenient place, by confining them upon it, I found them like other bipeds, determined to have their own way, and would stand up for days as though they feared a particle of the warmth of their bodies should be imparted to the eggs beneath them. As one of my neighbor's boys said, "they were bound *to stand up and sit.*" I now, when I discover a hen inclined to sit, make a nest in the breeding-room and shut her in permitting her to take the nest of her own accord, which she will generally do in a very short time. After the chickens are hatched, I put them, with the parents, into the small park, thus making it much less trouble to feed and attend them. S. M.—*Cameron Mills, N. Y., Feb.*, 1851.

DISEASES OF POULTRY.

Messrs. Editors :—Having witnessed much valuable information from your pen, in answer to questions from farmers and others, in different parts of the country, I have been induced by the request of several of your friends here, to take the liberty of asking you a few questions respecting a disease in poultry which has prevailed here this fall and winter to a considerable extent among dung-hill fowls. In the first place they appear stupid, their eyes heavy and almost entirely blind. In the next place there is a swelling of the neck and head, succeeded by a cough peculiar to hens, and making a noise as if partially choked. In this way they linger along two or three weeks, and either die or become very poor. During this time they discharge at the nose a viscid matter, in some few instances quite offensive to the smell. If you can tell us what the disease is, or what will cure it, you will oblige many of your friends. R. H. Foster.—*Lyons, N. Y.*

The disease with which your fowls are affected, we should judge to be the *roup*, though a very different disease is sometimes called by this name. Fowls thus affected should be kept warm and have plenty of water and light food, such as scalded bran, Indian meal, &c. The English authors say give calomel in grain doses, made into a pill with bread, but we never had much success in "physicking" fowls. Washing the head in warm milk and water sometimes gives great relief, and if it does not effect, hastens the cure.

A farmer in this county who has had much experience in rearing poultry, informed us that he had discoverod an effectual remedy for the roup, which he promised to furnish us in season for this number. If not received in time, we will give it in our next. It is represented as being a certain cure in the worst cases.



MORGAN HORSE, GENERAL GIFFORD.

MORGAN HORSE, GEN. GIFFORD.

Eds. Gen. Farmer :—The new edition of *Youatt on the Horse*, alluded to in your last number, contains a defective cut of the Morgan horse, "General Gifford." Although the publishers have given this horse the high praise (after an examination of several where perhaps a preference might almost appear invidious,) of selecting him as the best living specimen of his race to illustrate their work, it is to be regretted that a more truthful representation was not obtained. As the horse himself appears as near perfect as any I ever saw, I have procured from his present owner, Mr. Ingersoll, of Lodi, a stereotype copy of a better cut, which I send you, thinking your numerous readers may be pleased by seeing it in the Farmer It was engraved by Messrs. Miller & Mix, of your city, from a drawing by Mr. Wyckoff, an artist of great merit at Lodi. Though no power of the pencil can convey to paper the animated countenance or majestic strength and beauty of the original, it is as near like to nature, perhaps, as a picture can be made, and the best of several drawings of the same horse which has yet met my eye. The proportions of the original are eminently graceful; his color a dark chestnut. He weighs about 1100 lbs., and possesses immense power for his inches. He is perfectly gentle, kind, and true, in all places, at draught or otherwise; a capital saddle-horse; and was called by his former owner, Mr. Mason, now of Syracuse, a three minute horse, as I doubt not truly, from a specimen of his speed which I then saw. I. Dorr.—*Scottsville, Feb'y*, 1851.

* * *

Charcoal in Cisterns.—Two gallons of fine charcoal will purify a dozen hogsheads of water, when the smell is so unpleasant it cannot be used.

S. W.'S NOTES FOR THE MONTH.

The leading editorial article in the last Farmer contains extracts from Mechi's lecture before the Society of Arts, which, with the accompanying editorial remarks, are worth a life subscription to the Genesee Farmer. The best mode of making and saving stable manure is there shown: and its indispensable importance to every husband of the soil must be seen, felt, and fully comprehended by the most obtuse reader; more particularly by those who have toiled half their lives in exhausting their own God-given heritage.

The great secret why China is enabled to feed such a dense population, is, their superior art of making, saving, and applying manures; the maximum vegetable product is always attained there, because every element of vegetable nutrition is saved and judiciously applied both to the soil and in top-dressing the growing crop. How much nitrogenous matter is lost by our farmers, that might be saved by the application of simple pulverized clay and a little common salt, to fix the volatile ammonia. How much labor is lost in loading, hauling, and spreading manure, the most important part of which is lost, either before or after feeding a single crop. Liebig says that the "liquid manure of animals contains nearly all the nitrogen originally present in the food consumed." How importent, then, for every farmer to follow the plan indicated in Mechi's lecture—the "open floor and stable-cellar"—by the aid of which every particle of azotised matter is saved. Well may Mr. Lawes exclaim that manure may be made vastly cheaper and better by keeping stock, than by buying guano.

Why is the Agricultural so far behind the Mechanic Arts? Because, no matter how slovenly, or awkward, or neglectful, the farmer, nature will perfect her grain and her animals, if she has only half a chance; but woe be to that mechanic, or master builder, who constructs a bad ship, that neither sails well, nor carries well, nor behaves well in a gale at sea. It is sudden death to a foundry, or a machine shop, to turn out a bad steam engine, a bad boiler, or other imperfect machinery. No matter how much the master workman may console and stultify himself with the belief that his employers are no judges; he is emphatically a laid over man. On the other hand, the farmer may go on from year to year, growing shorter and shorter crops, eschewing all the late improvements as empiricism; and in the plethora of his stolid impracticable egotism, he can lay all the blame of his short crops to the seasons. Still, he gets some corn, rears pigs and cattle to consume it, and the little surplus he sells is sometimes unexceptionable in quality, thanks to nature and not to his art. But methinks the necessity of the case is fast working out a better system of farming. Even in our favored land of alluvial deposits, the farmer has long since found that the fatness of his soil is not as indefeasible as his title to its superficial surface; hence the general movement among our more enlightened farmers to pursue a more perfect system of manuring and culture; an example that cannot fail of having a salutary influence over the most doltish one of his class.

The Culture of Flax.—A correspondent of the Ohio Cultivator says that twenty bushels of flax seed may be grown on an acre as easily as ten bushels. He says, "as flax produces only one stem, it is absolutely necessary to sow two bushels of seed to the acre in order to get the largest yield, and to shelter the ground from the sun during the time the seeds are developed and matured; the soil should be deeply plowed, finely pulverized, and early sown, before the season of drouth arrives." To secure a perfect crop, he advises that artificial manure as a top dressing, composed of "ashes, gypsum and common salt, three bushels of the former to one each of the latter, to be applied to each acre two week after the plants appear." "On the Maume valley, as well as that of the Wabash, flax has been extensively cultivated during the past ten years, but owing to the improvident culture that has been very generally practiced, the crop has grown more and more into disrepute; hence the great falling off in supply in our markets, and the consequent very high price obtained for seed during the past two seasons." "When the top dressing is applied it would be well to seed down the field with timothy and clover, by which a luxuriant growth of clover will be obtained, even in adverse seasons for that crop. If the flax crop be pulled, no damage is done to the young clover plants, but on the contrary the loosening of the soil will impart a vigorous growth to the latter, that no other management could effect. Where it is intended at the time of seeding to pull the flax, the sowing of the timothy may be omitted until after the flax is pulled." In his next number the writer promises to give directions how to prepare the flax fiber for market. As the flax crop is a greater consumer of nitric acid, than any other crop, tobacco excepted, it is all important that stable manure should be freely applied to the soil; the top dressing above referred to will then do much toward fixing that ammonia, which alone by its transformation can supply the required nitric acid.

Do you take an Agricultural Paper?—Ten years ago there was not over thirty agricultural papers, all told, taken from this Post Office. At this time there are over 150 copies of the Genesee Farmer alone taken here. Still, there is a majority of men among us rejoicing in the name of farmer, who take no agricultural paper, and not a few who take no paper at all, nor any other printed article, if we except the Physic Almanack that they receive from the apothecary gratis. Such men put about the same value on a book as the Highlander did on the watch after it had run down.—*Waterloo, Feb'y,* 1851

HAY RAKES.

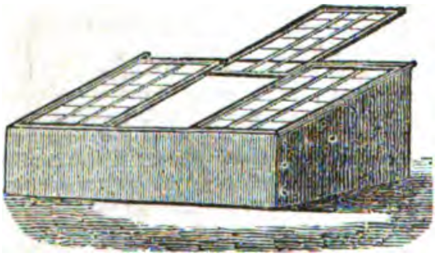
Messrs. Editors:—Having noticed in perusing the columns of your valuable paper, (Vol. 12, No. 1,) an inquiry for the best plan for a Hay Rake, attended with some remarks from yourselves relative thereto, I take the liberty to write a few words in regard to Hay Rakes used in Vermont, especially in Orange county and the counties adjoining. There are two kinds of horse rakes (wire tooth) used by the farmers in this section quite extensively, and in very good repute, commonly designated the double coil tooth Rake, and Ladd's Rake—Mr. Ladd being the original inventor and patentee of said rake. In performing the labor with these rakes, both are held and discharged as described in the remarks alluded to. The latter, when first introduced into the farming community here, was a revolving rake, but not giving satisfaction to the purchasers, the manufacturers of it left off the revolving part, and have succeded very well in the sale of it, and it now gives general satisfaction. The operation of performing the labor in the common way of holding and lifting up, is represented as being very hard and fatiguing by the operators, especially on large farms where there are ten or twelve acres raked in an afternoon. But there is an improvement on horse raking by the use of wheels, recently invented in this State, which greatly facilitates the labor, making it truly easy, and is highly approved of and recommended by those who have used it. It is known as Hovey's Improved Horse Rake. It is so constructed that the person performing the labor is accommodated with an easy seat, can manage the horse without any difficulty, and, by a very simple process, can charge and discharge the rake with ease and dexterity. The labor is done as fast and as well by this manner of raking, as by the common way of raking with a horse, and thought to be easier for the horse. Another advantage of this rake over others, is the saving of labor, by having it done by those who cannot do the raking in the ordinary way, or perform much amount of any labor. I know a man in this vicinity, upwards of seventy years old, who has raked from a hundred to a hundred and fifty tons of hay the past haying season with one of these rakes. He calls it a resting spell to get on to this machine and rake ten or twelve acres of hay in an afternoon. The extra expense of this over the common rake is not great, as it is not necessary to have extra wheels, the hind wheels to a common buggy waggon being generally used.

I am decidedly of the opinion that this improvement will very much benefit the farming interest and laboring agriculturists, and will take the preference over all other rakes, especially by those who are farming to any great extent. A Subscriber.—*Washington, Vt., Jan.,* 1851

THE KITCHEN GARDEN.

LITTLE can be done in the kitchen garden this month, at least in this section of country, unless it be the preparation and care of hot-beds. For the manner of constructing them, we should have referred those who have inquired to previous volumes of the Farmer; but as we now have on our list nearly twice as many subscribers as at any previous time, many have not the volumes to which we refer; we therefore re-publish the information desired:

Every one should have a hot bed, if it were only to forward plants for the garden. The too prevalent opinion is, that they are expensive articles and difficult to manage, requiring the skill of the professed gardener. Both suppositions are entirely erroneous. A hot-bed may be constructed by any man of ordinary ingenuity. A frame of about 12 feet long and 6 wide, which will allow of 3 sashes, each 3 feet wide will be found large enough for any family. It should be made of common two inch plank — the back about 3 feet high, the front about half that, the ends having a regular slope from back to front. This will give an angle sufficient to throw off rain, and give the full benefit of external heat and light to the plants within. If the beds are narrower, the front must be higher in proportion. The sides and ends are simply nailed to a strong post, four inches square or more, placed in each corner. For the sashes to rest and slide upon, a strip 6 inches wide is placed across the frame, the ends morticed or sunk in the sides of the frame, so as not to cause a projection. The sashes are made in the ordinary way, but without cross bars; and in glazing, the lights are made to overlap an eighth or quarter of an inch, to exclude the rain. Such a frame, costing but a mere trifle beyond the labor, will last for years, and furnish all the cabbage, tomato, celery, cauliflower, egg, pepper, melon, and cucumber plants needed—with a sprinkling of early radishes, &c. Where so large a frame may not be wanted, an old window may be used for sash, and all expense of glazing be avoided. The annexed figure will convey an idea to those unacquainted with it. One of the sashes is moved upward as in admitting air.



Hot beds should occupy a dry situation, where they will not be affected by the lodgement of water during rains or thaws. They should be exposed to the east and south, and be protected by fences or buildings from the north and northwest.

Where it is intended to merely grow plants for transplanting to the garden they may be sunk in the ground to the depth of 18 inches, and in such case require not more than 2 feet of manure; but when forcing and perfecting vegetables is designed, a permanent heat must be kept up, and the bed must be made on the surface, so that fresh and warm manure may be added when necessary. A depth of three to four feet of manure will in such cases be wanted. Manure for hot beds require some preparation. It should be fresh stable manure, placed in a heap, and turned and mixed several times, promoting a regular fermentation. It is thus made to retain its heat a long time; otherwise it would burn and dry up, and become useless.

The mold should be laid on as soon as the bed is settled, and has a lively regular-tempered heat. Lay the earth evenly over the dung about six inches deep. Radishes and lettuce require about a foot of earth. After it has lain a few days it will be fit to receive your plants, unless the mold has turned to a whitish color or has a rank smell, in which case add some fresh mold for the hills, at the same time vacancies should be made to give vent to the steam, by running down stakes.

The following is described as the German method, and we intend to try it:

Take a white cotton cloth of a close texture, stretch and nail it on frames of any size you wish; take 2 oz. of linseed oil, 1 oz. white of eggs, 2 oz. of yolk of eggs, mix the lime and oil with very gentle heat, beat the eggs well separately, and mix with the former—spread this mixture with a paint brush over the cotton, allowing each coat to dry before applying another; until they become water proof. The following are the advantages these shades possess over the glass ones

1st. The cost being hardly one-fourth.

2d. Repairs are easily and cheaply made.

3d. The light. They do not require watering: no matter how intense the heat of the sun, the plants are never struck down or burnt, faded or checked in growth, neither do they grow up long, sick, and weakly, as they do under glass; and still there is abundance of light.

4th. The heat arising entirely from below, is more equable and temperate which is a great object. The vapor rising from the manure and earth is condensed by the cool air passing over the surface of the shade, and hangs in drops upon the inside and therefore the plants do not require as frequent watering. If the frames or stretchers are made large, they should be intersected with cross-bars about a foot square to support the cloth. These articles are just the thing for bringing forward flower seeds in season for transplanting.

Lettuce should be sown as early as the ground can be prepared. Early peas should be sown as soon as possible. Now is the time to select seeds, prepare bean-poles, pea-sticks, &c., and when needed they will be in readiness.

SALT FOR CATTLE AND SHEEP.

MR. SOLON ROBINSON, of the American Agriculturist, calls in question the propriety of salting cattle and sheep in summer or winter, as is practiced by most persons who keep these animals. He has seen sheep do well on the western prairies without salt, and thinks it could be dispensed with without detriment. Unquestionably all domestic animals can subsist on their appropriate aliment without salt, just as men can live on lean meat, or bread, or beans and peas, alone; but that fact by no means proves that a little salt in the food of man and brute, is not really beneficial. All physiologists agree that both chlorine and soda are found in the digested food and blood of animals; and that chlorine aids much in the process of digestion, and soda in the purification of venous blood. Now, salt is a compound of these two elements, viz., chlorine and soda or sodium. It is true that lions subsist on fresh meat without salt, and many savages do likewise; so too, lions and savages live without clothes or houses, but is that fact sufficient to overthrow the necessity of wearing apparel and artificial shelter? Many things are possible in vegetable and animal life, which are by no means desirable or profitable. A small quantity of pure salt, taken daily into the system of man, or those of his cattle, sheep and horses, will promote digestion, and aid in purifying the blood. Buffalo, deer and wild cattle get saline water or clay when they can—instinct teaching them its use and value, as it does the value of grass.

STAGGERS IN CATTLE is caused by a change from poverty to rich feeding. It is most common in cattle turned into luxuriant pasturage in the spring, or early in summer; and those that have been kept poorly during the winter are most liable to this disease.

Symptoms — Dulness; a constant dispositson to sleep, resting the head on any convenient place, and reeling and staggering in attempting to walk.

BEES.—No. 7.

Spring Management.—The months of March and April are a critical period for bees. Many families perish from famine during these two months. Bee-keeper's should examine their hives early and often, and such as are apparently without honey, should be fed. You should remove all families liable to suffer from famine, to your cellar, if a *dry one;* if not, to any room in the house, or out-house, that can be made dark. All light must be excluded Here you must set the hives *bottom upward.* The next point is to give the food. If you have any honey in the comb, lay the pieces directly upon the combs within the hives, and as near to the bees as possible; then rap upon the sides of the hives, and the bees will ascend and remove the honey to the centers of their combs, to be consumed at their leisure. If you feed liquid honey, you should heat it enough to run freely; then lay a piece of empty comb, as nearly horizontally as may be, over or near the bees; and to do this, you may have to cut off the tips of combs in hives but partially filled, or place a strip of wood across the interior, to serve as a support of one side of the comb. When adjusted, take your warm honey in a small pitcher, and fill the cells at the upper surface. The bees will remove this honey as before mentioned. When no honey is to be had, (West India honey is as good as any,) you may make a *syrup* of sugar, by adding about a half pint of water to three pounds of sugar; then heat it till it boils. After it cools, take off the scum, and it is ready for use. Hives that are full of combs, require a portion to be cut out sufficient to insert a piece of comb horizontally, as before stated. The hives may be covered with a cloth, or a wooden cover, always giving sufficient room for the admission of air, without allowing the bees to escape. The feeding should be done at evening, since the bees will be much more quiet at this period, while removing the honey, than in the day time, even if it be a perfectly dark place where the bees are kept. They are apt to endeavor to escape when aroused in the day-time, especially if any light enter the hive. The period to remove the bees to a dark location, for the purpose of being fed, is at any time from December to April. As soon as pleasant weather approaches in April, place them where they are to stand for the season. I now refer to a northern latitude, and especially to Western New York, where we have but little warm, sunny weather in the winter season. In sections where the skies are more clear, and especially farther south, feeding may be effected, through the aid of the sun, in the supers or chambers of hives, as fully set forth in the *Bee-Keeper's Manual.* A little salt should be put in the food of bees in the spring. Don't be at all uneasy in regard to keeping your bees confined several months, when it is necessary to do so. It is better that they should be allowed to void their fœces, but it will not seriously injure them to be shut up five months. T. B. Miner.

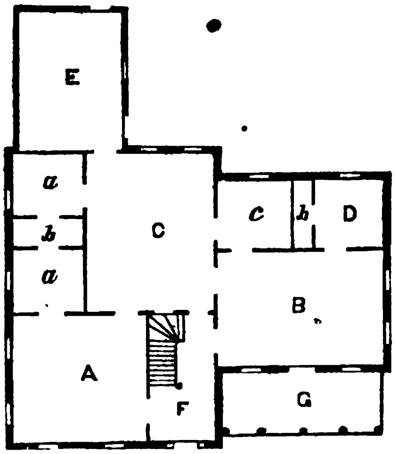
An Enquiry—*Facts vs. Theory.*—If it be as Mr. Downing states, that the "air-tight and ten-plate stoves" are the great poisoners of American health, how does it come to pass that the Germans, of Pennsylvania, who have used the "ten-plate" longer, and more generally, than any other American citizens, are the healthiest and longest lived people in the United States? Can Mr. Downing answer? S.

Country Residences.

We shall continue, during the year, to give plans of cottages and farm-houses. If none exactly suits the wants or taste of any one about to build, they will certainly aid all in forming their own plans. The one below is from a correspondent, and the cottage on the next page we take from *Downing's Country Houses.*

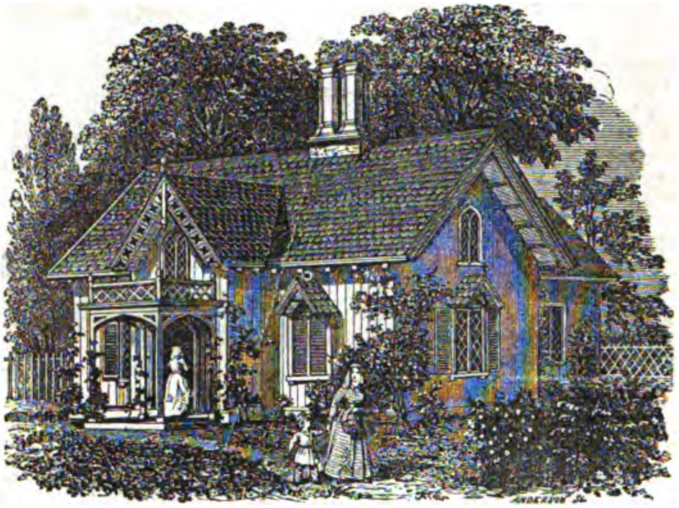
PLAN FOR A FARM HOUSE.

Messrs. Editors:—As you are in the habit of giving such plans to your readers, I will give you a plan of a very convenient farm house. Being a joiner myself, and working among the farmers, I have had a very good chance to learn their wants; and, as it is the poorer class of farmers that are in the most need of help for a plan to come within their purse and convenience, (for those are the most difficult houses to plan,) I will give you one of a small cheap farm house. I told one of my neighbors the other day, when he called on me to give him a plan of a house, I should charge him one dollar (and very cheap at that) for drafting for him a farm house, but if he would pay three shillings for the Farmer he should have as good a plan as I was capable of drafting, for his convenience, and the paper to boot. So he thought it much the cheapest way to obtain the plan for his house.



A, Parlor, 15 by 15. B. Dining room, 14 by 18. C, Kitchen. 15 by 18. D, Bed room. 8 by 8. E, Wood-house. 12 by 16. F, Hall, 8 by 15. G, Veranda, 7 by 17. a, a, Bed rooms, 7½ by 8. b, b, Closets. c, Pantry. 8 by 8.

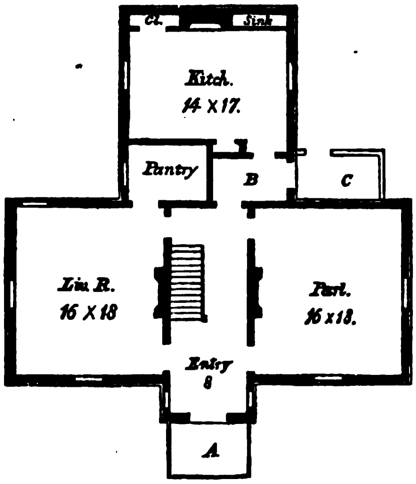
Here you see a house, standing end to the road, 23 by 33 feet, 1½ stories high, and 14 foot posts; the chamber to be partitioned like the first floor, with frieze lights in the side to light the bed-rooms, and other rooms, if required. The wing on the right, 22 by 18 feet, is a dining room, or common living room for the family; with a veranda in front, and bed-room, clothes-press, and pantry in the rear. You see the pantry has two doors, to be convenient for both rooms; a wood-house in the rear, 12 by 16 feet. The large rooms all open in the hall, and being compact, makes it convenient. My estimate on the carpenter and joiner work is $354, and board $30. The cost of materials would vary in different places; in this place, the carpenter and joiner work would about equal all the rest of the expense of the house. Philip Hoag.—*Richburg, N. Y., Jan.,* 1851.



A SYMMETRICAL COTTAGE.

Whoever loves symmetry and the simpler kind of cottage beauty, including good proportion, tasteful forms, and chasteness of ornament, we think, cannot but like this little design — since it unites all those requisites. It is an illustration of a cottage made ornamental with very trifling expense, and without sacrificing truthfulness to that kind of tasteful simplicity which is the true touchstone of cottage beauty. This cottage is designed in the rural Gothic or English manner, but much modified, so as to adapt it to almost any site.

The light, open porch of this cottage may be omitted without injuring the design, but it gives the front an air of so much feeling and refinement, aside from its manifest utility, that we should always hope to see it adopted by those about to execute the design.



GROUND PLAN.

Accommodation. — The kitchen is on the same floor with the living-room. Many families would prefer to use the room marked "parlor" in the plan, as a bed-room, and, if so used, the cottage would be a very complete one for a small family — having living-room, bed-room, pantry, etc., on the same floor. But to others who would prefer to have no bed-room on this floor, a parlor would be looked upon as far more important.

In the plan, A is the porch, from which we enter the hall or entry, 8 feet wide — with the two best rooms, each 16 by 18 feet, on either side of it. Connected with the living-room, in its rear, is a good pantry. B is the back-entry communicating with the kitchen. C is the back-porch, which may be left open in summer and enclosed in winter, when it will serve as a place for coal and wood. On one side of the kitchen fire-place is a closet, and on the other a sink, into which, if possible, a water-pipe should be brought.

The first story of this cottage is supposed to be 10 feet, and the chamber story 5 feet on the sides, and 8 feet in the middle of the rooms. The pitch of the roof is a right angle.

As the entry, or hall, of this plan is wide, and the arrangements both simple and convenient, we think it will be difficult to build a more agreeable cottage, for the sum proposed, than the present design. — Though picturesque in its exterior, it is not so much so as to *demand* a highly rural or picturesque site, but would look equally well either in the suburbs of a town or in the midst of the country.

The chimneys in the elevation show one of the forms made in Garnkirk fire clay. These are sold by the importers (Jas. Lee & Co., New York and Boston) at from $4 to $6 each. The base of this chimney (of common brick work) should be carried up a couple of feet above the level of the ridge of the roof before the chimney-tops are set.

Construction. — The exterior of this cottage is vertical boarding—of planed and matched floor plank about ten inches wide. The window frames are from three to three and a half feet, inside measure — with a centre mullion and latticed sashes. The roof of the porch is nearly flat and roofed with tin, so as to form a balcony to the bed-room window over it.

The house is, of course, filled in with brick on edge, set flush with the outside of the frame, and the inside walls plastered on the face of the brick.

Estimate.—The cost of this cottage, with the interior neatly finished and painted in oil color, and the two principal rooms grained and varnished like oak, and their walls papered with suitable paper—all the other walls being brown walls white-washed, would be $835.

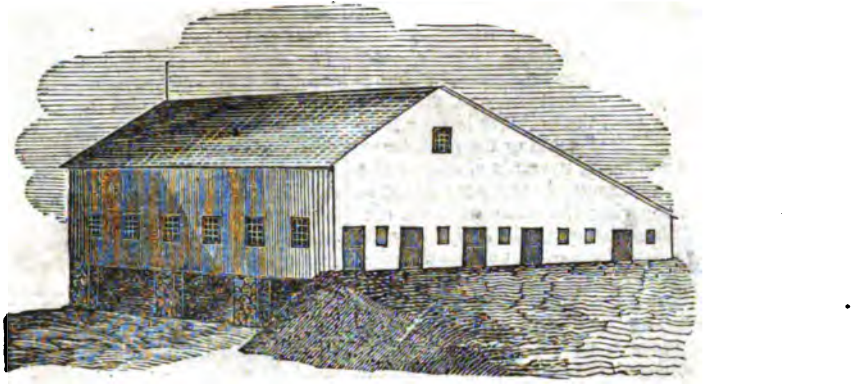


FIG. I. PLAN OF A BARN WITH MANURE-CELLAR.

BARN WITH MANURE-CELLAR.

MESSRS. EDITORS:—A few days ago I was on business at the Post Office, when the Genesee Farmer for January was handed to me, which I perused with much inquisitiveness. In the course of my perusal I saw a communication headed "*Farmers, save the wash of the barn-yard*," a subject in which I feel myself much interested. The past season I have built a new barn, with a view to prevent the leeching of manure, which among other improvements contains a manure-cellar and a cistern to receive the drainage of the manure heap. For a full description and cut, see the *American Farmer*, Vol. 1, No. 4. Although it would be an expensive plan if every farmer should build a new barn, yet, had I a Swiss or bank barn, I would tear out the stabling below and convert that place into a manure, and fit up the stabling in one of the mows; for no one who has not the experience, can form an idea of the quality of the manure made in a manure-cellar, by mixing daily the droppings of horses, cattle, and swine, and spreading it evenly on the manure heap. EDWARD KOHLER.—*North Whitehall, Pa., Jan'y*, 1851.

The following is a description of Mr. KOHLER's barn, with drawings, &c., translated from the "*American Farmer*," an excellent agricultural magazine in German, published at Harrisburgh, Pa.:

"MR. I. M. BECK:—Enclosed I send you, as desired, a draft and description of my new barn. Fig. 1 is a view from the south-east, (vide engraving.) The barn stands at the foot of a western hill, running south. The main building is 50 feet long, 38 feet wide, and 18 feet high; and there is a building 18 feet square attached to the northeast corner, on the north side, giving to the east side of the barn a length of 56 feet. The whole is framed of strong oak timber, weather-boarded and covered with slate; upon the western end of it there is a lightning-rod.

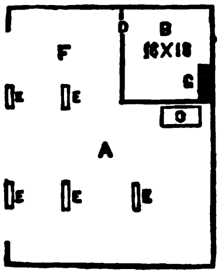


Fig. 2. BASEMENT STORY.

"Fig. 2 represents the lower or basement story. A, manure-cellar. B, cellar for vegetables. C, a cistern for collecting the liquid manure. The floor of this cellar is so laid that from all sides the liquid matter runs toward the cistern. D, door leading to the cellar for vegetables. E, E, &c., are stone pillars upon which the frame-work of the building rests. F is now used as a waggon-shed, &c. G, stairs leading up to the threshing-floor, directly opposite a door leading into the "fodder-gang" in that part in which the cattle are fed. The manure-cellar affords to cattle an agreeable protection against cold, rain, and storms, the open side of it being south and facing the barn-yard.

"Fig. 3 represents the floor of the barn. A, A, entry and "fodder-gang," [foddering passage,] commencing at the east end of the barn, running toward the threshing floor, thence along the same and through the attached building to the north side of it, where a window, not marked in the draft, throws light into this passage. B, horse-stables. C, cattle-stables. These stables are nine feet high, and can be raised by means of ventilators, shown in fig. 1. The animals stand upon a platform six inches high, by means of which a gutter or canal is formed, receiving all their droppings. D, D, &c., doors. E, threshing-floor, 12 feet high. F, F, F, F, are trap-doors through which the manure is thrown into the cellar. G, trap-door through which straw, chaff, &c., may be thrown upon the manure. H, cutting-room. I, grainery. J, grain-mow. K, barn-door.

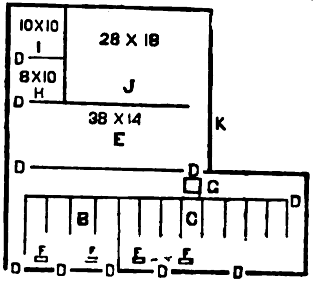


Fig. 3. BARN FLOOR.

CULTURE OF POTATOES.—*Messrs. Editors:*—I have found by experience that the best way to raise a large crop of sound potatoes, is to plant the potatoes, and as soon as the first ones begin to show the tops above ground, cover them and the whole ground with manure; and when they are fairly above the ground, plaster them freely. The manure destroys all the weeds and grass, and when you hoe them the labor is light, and the tops soon cover the ground. The manure being on the surface, keeps the earth moist and loose; the potatoes grow large and of the first quality, and are not likely to rot. E. W. ROBINSON.—*Farrel Place, N. Y.*, 1851.

THRESHING OATS.

MESSRS. EDITORS:—Having seen in your February number a communication signed "ARTEL," of Hornby, N. Y., containing an estimate of cost attending the threshing of oats with the ordinary large "Itenerant Threshing Machines," making the cost, including board of men and team, upwards of three and a half cents per bushel, (a pretty heavy per cent. upon their value,) and comparing the same with the cost and advantages of threshing with the flail, I beg the privilege of going a little further, first acknowledging the latter mode the better of the two described by him. The farmer's grain not always being in a condition to allow long delay, and the quantity too large to admit of the slow process, as well as the fluctuation of the market at different seasons, together with the exposure and waste from various causes, he is in most cases compelled to submit to this extravagant tax, levied on him by the "Goths and Vandals" of the surrounding country, in the form of the large *eight* and *ten* horse powers.

Having for many years devoted the greater portion of my time and attention to the wants of the agricultural public in the way of labor-saving implements and machinery, and been engaged in the manufacture and introduction of the same, I may perhaps be allowed to go a step further than "ARTEL," and see if a better mode can not be adopted, by which the farmer may be placed in a more independent position in all respects, save much time and expense, and better suit his own convenience at the same time. As the Railroad Horse-Powers, together with the small spiked cylinders now used for the threshing machines, have been so simplified as to do away the prejudice heretofore so justly felt against all endless-chain horse-powers, (on account of injuring horses,) I will compare the cost, &c., of threshing an equal amount with the R. R. machines, (viz., 600 bushels,) rating the capacity of the machines at the average amount they will do, (and which the warranty of responsible manufacturers makes a condition of sale, the purchaser boing his own arbiter, after three months use and trial.)

With a two-horse power and the other parts to match; with two horses which shall together weigh not less than two thousand pounds, on an elevation of 1½ inches to the foot, and a travel of 2¼ miles per hour, either with our without harness; and with four men, four hundred bushels of oats can be threshed per day for months together, without change or injury to horses. Taking his rate of charges, we arrive at the following result, assuming the farmer to own his own machine:

Four men 1¾ days each,	$5 25
Two horses 1¾ days each,	1 50
Board of four men 1¾ days.	1 14
Board of two horses 1¾ days,	75
Cleaning up for market with fan-mill,	1 75
	$10 39

making a fraction over one cent and seven mills per bushel, and having at the same time the advantage of doing his own work with his own farm help and team, and at such times as the market, the weather, or his own convenience is best accommodated. So much for the two horse machines in 1¾ days.

As a majority of farmers pursue a mixed farming, and have a variety of grains and grasses, with a power and a machine of the improved kinds now in use, he can do all his threshing and secure his own grass and clover seed, if not a surplus for market. The power will be found of sufficient use, in sawing wood and for various mechanical purposes, to more than pay the interest on the investment and ordinary repairs from wear, &c. Should the farmer prefer to thresh his oats day by, at the rate of twenty or thirty bushels, with his monthly laborer he can do so with the assistance of a boy in from one to one and a half hours, with but one horse, leaving the balance of the day to be devoted to making and repairing implements and attending to the thousand and one wants always about the farm, buildings, &c., &c. When the farm is small, and the quantity of grain small, a saving of some $25 to $30 is made by the purchaser in buying a one instead of a two-horse power, with which about one-half the amount can be done as with the double power when each are worked up to their full capabilities. H. L. E.—*Albany, N. Y.*, 1851.

STOCK IN CAYUGA COUNTY.—*Messrs. Editors:* It may be of interest to the agricultural portion of your readers, to learn that an addition to the superior stock of short horn cattle in Cayuga county has lately been made, in the purchase by ELISHA W. SHELDON, Esq., of Sennett, of Mr. GEO. VAIL, of Troy.

Mr. SHELDON has obtained two thorough bred animals—"Kirkleavington," a bull calf, is roan, out of Mr. VAILS imported bull "Duke of Wellington;" and "Lucilla 3d," a red and white heifer, between one and two years old, out of "Lucilla 2d," and sired by LEWIS F. ALLEN's bull "Don." For extended pedigrees, see American Herd Book.

At the late Fair of the American Institute, "Kirkleavington" and "Lucilla 3d" were each awarded the first premiums in their respective classes, and they are indeed a choice selection from Mr. VAIL's very excellent herd, possessing, as they do, pedigree and merit inferior to none. With such cattle, the town of Sennett will fully maintain her place in the premium lists (both County and State,) of former years, for which the enterprising farmers of that town deserve much credit. A. B.

EFFECTS OF LIME, GUANO, AND PLASTER.—Some fifteen years ago, I was among the first who introduced lime as a fertilizer on our farms, since which time almost every farmer is making efforts to procure it, although at considerable cost. We have to haul our lime from twelve to fifteen miles, at a cost of 15 cents per bushel. Within the two last years I have been experimenting with Peruvian guano; and so far as it relates to my wheat crop, it has had the happiest effect. Where I guanoed, the wheat was one-third better than where I limed at the rate of fifty bushels per acre, accompanied with a good supply of barn-yard manure. Alike in all other particulars.

Last fall I put a very poor field to wheat, on part of which I sowed a mixture of guano and plaster, and on another part added common salt, and on the balance of the field I sowed only the salt, at the rate of six bushels per acre. The parts having the guano, plaster, and salt, have the best top at this time. ELIDA JOHN.—*Bear Gap, Pa.*, 1*st mo.*, 23*d*, 1851.

MOULDY BEANS may be restored and made fit for use, if not very bad, by rinsing well in hot water, and carefully drying. Mouldy corn or peas may be treated in the same way.

Horticultural Department.

EDITED BY P. BARRY.

A FEW HINTS ON PRUNING AND MANAGING ORCHARDS.

There is so much said about our clear and dry atmosphere, and bright sun, obviating the necessity of pruning ; and so much said, too, about pruning being an "unnatural" operation, that a great many people have actually settled down in the belief that on the whole it is as well to let trees grow in their own natural way. The orchards of Western New York are not much worse managed than those of other sections ; in some respects, perhaps, they are better ; but we can safely say that there is not one in 20 of them but may be doubled in value in one year, by a judicious pruning of the branches, and a dressing of compost at the roots. Our young apple orchards produce fruit of the finest quality—large, smooth, brightly colored, and beautiful ; and it has not to be hawked about the streets to find a purchaser. In all states of the market there are buyers enough, and at high prices, for such fine specimens ; $1 per bushel, $3 and even $4 per barrel, are ordinary prices for extra fine lots of Northern Spy, Red Canadian, Spitzenburgh, Swaar, &c., while the average market price of these is about 50c. per bushel, or $1,50 to $2 per barrel.

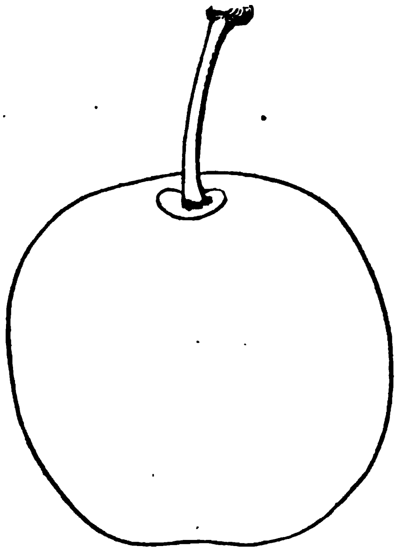
The cause of the superiority of the fruit from a young tree, is that, the head has not yet become filled up with ad ense mass of small twigs, is open, the sun reaches all its parts, the wood is stout and mature, the foliage is large and healthy, the soil too is unexhausted, the roots spreading rapidly in consequence of the vigorous condition of the head, find abundant nutriment ; and the result is large, bright, and beautiful fruit. As the trees become old, being left unpruned, the heads gradually fill up with a profusion of weak twiggy shoots, growth among the branches becomes less vigorous, and consequently the roots push feebly too. An immense number of fruit buds are produced ; indeed, every part of the head becomes crowded with them ; consequently the fruit is small, three-fourths of it is shut out from the sun, or rather the sun is shut out from it, and therefore it has neither flavor nor color. Hence we frequently see Spitzenburghs, Northern Spys, Baldwins, &c., that ought to be as red as blood, present a blanched and sickly appearance, that completely disguises them; and no man who knows what a good apple is, or ought to be, will buy them to put upon his table. We have a barrel of Spitzenburghs and Northern Spys in our cellar at this moment, and the two put together are not worth a dollar. They were sent us too by a gentleman who ought to have known better ; but he probably had not seen them. Occasionally they have a red spot or streak on them ; but as a general thing, they have a pale greenish hue, and are totally void of richness or flavor, and they keep badly ; their juice is watery and immature. They explain the cause themselves—they were grown on the lower side of branches, or in the interior of trees, where they had no sun.

When the public, we mean the consumers of fruit, in our towns and villages become more familiar with the peculiar characters and qualities of fruit, it will be more difficult to dispose of these green, insipid productions ; and we would now caution every one against buying such things as pea-green Northern Spys, Baldwins, or Spitzenburghs, because they are destitute of flavor, and will not keep. Yellow apples suffer just as much from shade, but do not show it so strongly. They have a cold, bluish tinge, that indicate their imperfect character, and their juice is like water. Those grown in a sunny aspect have a deep warm color, and the juice sparkles like wine—a peck of these is worth a bushel of the others.

We would have cultivators and orchadists, think of their own interests, and turn to, now, and thin out with the saw and the pruning knife the weak superfluous branches that fill up the spaces that ought to exist between the bearing branches, to admit the sun to all the fruit. Do it freely but carefully. An active man, who knows how to handle a saw and a knife, can soon go through an orchard of considerable extent. In connection with the pruning, a liberal dressing of compost should be given ; stable manure well decomposed, ashes, and muck, well mixed together, will do very well ; lime, too, is generally good ; and in light, sandy soils, clay may be added : but in all cases the well rotted stable manure should be the basis. Peach trees should be pruned, but not till the hard frosts are over and the buds are swelling slightly, so that fruit buds will be easily discerned.—We are glad to find that this subject begins to receive more attention. Some of the best orchadists about our city begin to prune regularly, but not one of them do it thoroughly. They allow their trees to bear twice or three times as many fruit as can be matured with safety to the tree, and they let the lower parts become gradually denuded ; they confine their pruning too much to the outside of the tree ; there only they remove the points of the shoots : but this is not the way to do it well. The pruner should have a pair of pruning shears, with which he could cut faster than a person can count ; and taking one branch of the tree after another, shorten all last year's shoots on it so much that half the fruit buds will be taken away and new shoots for next season's bearing produced towards the base of the present shoots, to keep up a supply of young wood on all parts. This is the only way in which a peach tree can be maintained healthy and fruitful. Every branch, large and small, should be furnished with bearing wood on all its parts. Some people who have never given such attention to their trees, will look upon this as a prodigious labor altogether too great to be undertaken ; but we only ask them to try it on one tree, and note the results. It is no excuse for a man to say, "it takes us so long, because we are not accustomed." Those who are engaged in peach orcharding should learn to handle their knife and shears, or hire some one to do it ; for they cannot expect to get along well without using them, and that expeditiously and well. The time is coming when there will be more competition than there has been in the fruit market, and those who have pursued the most thorough system of culture, by which they are enabled to present the largest and most perfect fruit, will monopolize all the profitable part of the business. The negligent, half-way cultivator, will have to be contented with the crumbs.

RARE AND FINE FRUITS.

We give below, from the *Horticulturist*, figures and descriptions of two new or rare fruits that strike us as being likely to prove valuable. We know nothing of them personally, but the character given of them by Mr. Downing presents them under a very flattering aspect. A short time ago C. M. Hovey, Esq., of Boston, informed us that a cherry resembling this Great Bigarreau, and very probably the same, had been imported to that vicinity from France, without a name, and that a name had been given it, which we do not now remember. We hope this point will be cleared up.



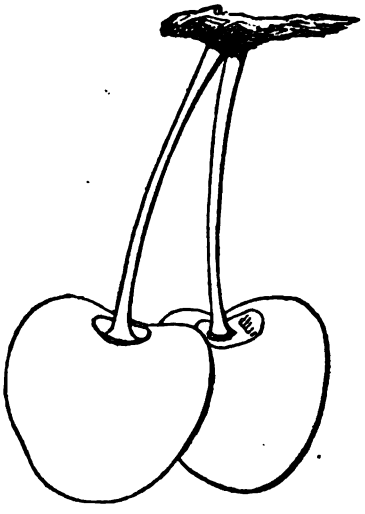
THE GENRRAL HAND PLUM.

"We think this may be called the largest yellow plum known—certainly the largest native variety. Its history is obscure, but we believe it was originated somewhere in Maryland. The first trees were, we believe, sent out from the nursery of Messrs. Sinclair, of Baltimore, a number of years ago, but the variety is still very little known to cultivators.

"We first received specimens of it from Mr. Eli Parry, of Lancaster, Pa., and noticed them very briefly in the Hort. for 1848. The only accurate account published of this fruit, by any reliable practical cultivator, is contained in a note from Mr. A. Fahnestock, of Lancaster, Ohio, in the Horticulturist, vol. III, p. 332, in which he says, 'from the fruiting of this tree, for *eight years past*, and general observation —(though the location is a bad one,) I am induced to call it one of the most valuable plums, on account of its never having failed to bear a full crop, and its maturing its fruit perfectly. I admit that it is not so finely flavored as the Washington'.

Our opinion of this plum is, that it is simply a *good* fruit, not of high flavor, but so large, handsome and productive, that it will become a favorite for market cultivation.

Fruit very large, roundish oval, regularly formed, with an obscure suture running half round, and terminating at the top in a small scarred point—the remains of the old style. Skin smooth, deep golden yellow, slightly marbled with greenish yellow. Stalk unusually long, moderately stout, set in a very small shallow cavity—the whole of that end of the fruit being rather flattened. Flesh pale yellow, moderately juicy, sweet and good, though not of high flavor. It parts freely from the stone, which is ovate, light colored, and small for so large a fruit. Branches nearly smooth, leaves large and long, with long foot-stalks. Ripens the first week in Sept.



THE GREAT BIGARREAU CHERRY.

This, unquestionably the largest and most beautiful of all cherries, appears to be scarcely at all known to pomologists. A foreign variety, perhaps more distinct than any other large cherry in its foliage, growth, and in the size, excellence, and color of its fruit,—which is equal to the Black Tartarian in flavor, and surpasses it in beauty and productiveness, certainly should not be unknown to American pomologists. And yet we cannot identify it with anything known or described in the English, French or American books on fruits.

The only tree known to us of the Great Bigarreau, (a name we have adopted temporarily, until the real name is discovered,) is one of pretty large size, upon the premises of Mr. Lindley M. Ferris, nurseryman, Coldenham, Orange county, N. Y. Mr. Ferris first astonished us by bringing branches of this tree in full, laden with superb fruit, 2 years ago—supposing we should be able to identify it with some foreign variety, we made a drawing and description of it at the time, and waited to make further research on the subject. So far, our labor for two seasons to identify it with any other sort, has been in vain, and we now publish the description, to introduce what we think the most magnificent of cherries, to the notice of our fruit growers, and partly with the hope that some of our pomological readers in France may be able to recognise and give us its true name.

The Colden estate, which Mr. Ferris now holds, has some valuable sorts of foreign fruits upon it; and among a number of trees imported from France about 20 years ago, were this and several other cherries—including the Belle de Choisy. No labels or invoices having been left, all record of the sorts was lost. But the trees have grown finely, and this one in particular has formed a large and luxuriant head, and for several years has been annually loaded with large crops of fruit.

As a young tree, the Great Bigarreau is remarkable for its upright growth, with very few side branches. The foliage is also very distinct from that of either the Tartarian or the light colored Bigarreaus, by being unusually *long* as well as large—much larger indeed, than the leaf of any other cherry known to us.

The tree is usually a great bearer, producing heavier crops than the Tartarian, and nothing can well be more beautiful than its branches laden with clusters of very large cherries, much ruddier and lighter in color than the fruit of the Black Tartarian—something in color between red and black.

The following is its pomological character. Fruit very large—considerably larger than the Black Tartarian, which it most nearly resembles in flavor, texture of the flesh and general appearence, though it differs in color, size and form—the form being an oblong heart-shape—*high shouldered*, and not irregular in outline like the Tartarian. Skin beautiful deep red, becoming nearly black at maturity. Stalk thick, rather short, swollen at both ends, and set in a deep cavity. Flesh, in texture, juiciness and flavor, very much like and fully equal to the Black Tartarian. Tree very luxuriant, foliage very long and large. Ripens with the Tartarian, or a few days later.

We have only to add that when we first saw this cherry in bearing, we supposed it would prove identical with the Great Bigarreau de Mezel, a French cherry described in a previous vol. of this Journal. But a comparison of the foliage and growth of the young trees of both varieties in the same soil, the past season, has proved that the two are quite distinct. We can only say, therefore, that the Great Bigarreau is a very distinct and a very superb foreign cherry, which succeeds admirably here, and must become a great favorite in fruit gardens

ANSWERS TO CORRESPONDENTS

Mr. Editor.—Is the Northern Spy affected by the bitter-rot as has been reported in the west? (1)

How does the Red Canada compare in value as a tree and fruit with the Esopus Spitzenburgh—where the former flourishes, is it not a profitable variety? (2)

What is the best Professional Work on Trees and Plants? I have several, but they are abridged so very meagre as to be quite unsatisfactory. (3)

Will you please give us the most approved method of rearing Evergreens from the seed—or more especially the Red Cedar? The cut worm proves exceedingly troublesome here with any such choice feeble seedlings. (4) F. K. P.

(1) Not to our knowledge; we have never heard a syllable to that effect among our cultivators, or others who use the fruit here.

(2) To our taste the *Red Canada*, as it grows here, has no superior, except the Melon. It is better than the Spitzenburgh, and the trees about alike—neither vigorous.

(3) *Loudon's Arboretum Britanicum*—four large volumes of text and four of exquisite engravings. It costs about $40. You can get it in New York, of John Wiley, G. P. Putnam, or any importer of foreign works.

(4) This is a problem we are trying to work out. The great difficulty is our *hot sun*, that burns off the young plants as fast as they appear. We have no experience with the cut-worm. The best method of rearing evergreens from seeds that we know of at present, is to sow them in boxes of light earth—say about equal parts of fine leaf mold from the woods, common bank sand, and good friable loam, free from insects. Mix all these thoroughly. Sow the seeds broadcast in the boxes, cover lightly, place the boxes on the north side of the wall or fence, and water carefully. By being in boxes you will be better able to winter them carefully. After two years' growth, they may be bedded out into a nice, light, north border, quite close. Red cedar does not generally come up the first season.

Pear Seeds.—(P. R., Trivoli, Peoria Co., Illinois.) We do not know of pear seeds for sale at present. Mr. Isaac Hildreth, of Big Stream Point, N. Y., collected and furnished many bushels of clean seed last autumn, at the rate, we believe, of $40 or $50 per bushel. You had better apply to him another season.

Grafting the Currant and Gooseberry.—(J. W. G.) This can be done; but as both are so easily propagated from cuttings, grafting is seldom practised. Both plants vegetate very early in the spring, and the scions should therefore be collected in winter, and grafting be performed rather in advance of the grafting season—say early in March.

Twenty best Apples for General Cultivation in Connecticut.—*Early*—American Summer Pearmain, Red Astracan, Early Harvest, Sweet Bough, Early Strawberry or Summer Rose. *Autumn*—Golden Sweeting, Gravenstein, Fall Pippin, Hawthorndean, Dyer or Pomme Royal. *Winter*—Baldwin, Peck's Pleasent, Rhode Island Greening, Newtown Pippin, Seek-no-farther, Talman's Sweeting, Swaar, Northern Spy, Roxbury Russet, Ladies' Sweet.

Best Twenty Pears.—Bloodgood, Bartlett, Dearborn's Seedling, Madelaine, Summer Francreal, Tyson, Buffum, Beurre Bosc, Beurre Diel, Beurre Golden, Belle Lucrative, Dix, Flemish Beauty, Louise Bonne de Jersey, (White Doyenne, if it succeeds there,) Vicar of Winkfield, Glout Morceau, Winter Nelis, Lawrence, and Beurre d' Arremberg.

Shipping Trees.—(J. D., Snowden Township, Penn.) There is no difficulty in sending trees from this place to Pittsburg.

Hardy Cherries and Stocks.—(V. C. M., Wisconsin.) The May Duke, Carnation, Belle Magnifique, Belle de Choisey, English Morello, and most of these classes, are quite hardy. The Mahaleb is hardy and succeeds in many places where the Mazzard fails. Hardy seedlings may also be produced from seeds of the common Morello, if you can get them.

The Chili Pine.—(T. W. Painter.) The dingy hue it assumes in winter is not permanent; with the return of the growing season it resumes its green color; the hardy native cedars turn brown in the winter. Plants can be obtained here.

Northern Spy Apple.—(J. A. P.) Please refer to the November number of the Farmer for some very conclusive facts in regard to the points referred to. Your other requests will be attended to.

A Disease of the Cherry Tree.—(E. B. B.) Such a malady as you describe—the effusion of gum on the young shoots—is entirely unknown to us, and may be produced by some insect. Are your trees on *dry* ground? If not, the cause may be there. Cherry trees will soon canker and die off on a retentive or ill-drained soil.

When to Transplant Evergreens.—(N. W. V., Damascus, Pa.) Any time in the month of April. May will do very well; but dry weather is more to be apprehended then. Take up a ball of earth about the roots, if possible.

How to Repel the Locust Borer.—*Mr. Editor*:—I have a beautiful locust tree, twenty feet in height, which I raised from seed sown by myself in April, 1838. In the summer of 1847, the trunk, to the height of 5 feet, was attacked by the Borer, which made sad destruction with my tree. I washed the bark with ley, soap suds, lime water, brine, &c., without effect. In 1848 my tree appeared to be dying. I then took a knitting needle and inserted into the holes made in the bark by the Borer, a quantity of smoking tobacco. I repeated the same in the spring of 1849 and 1850; at this time the bark has in many places nearly healed up, and the tree has assumed a healthy appearance, bearing last summer several racemes of beautiful flowers. Perhaps some persons who value locust trees as I do mine, may try tobacco with the same success as I have done. A. F. A.

A Horticultural Hall in Cincinnati.—A. H. Ernst, Esq., President of the Horticultural Society of Cincinnati, has addressed Mr. Longworth a public letter on the subject of the erection of a Hall for this Society's exhibitions and kindred purposes. From the horticultural zeal of Mr. Longworth, his ample means and liberality, we have no doubt whatever but that he will give substantial and efficient aid to the enterprise. And the citizens of Cincinnati, more especially her numerous and wealthy amatuer horticulturists, will not fail to perform their part well. *The building must go up*; it will be an honor to the city, and particularly to those who participate in its erection..

Revival of the Maryland Horticultural Society.—We are glad to see by the *Am. Farmer*, that this old Society has been re-organized under favorable auspices. We notice among the names of the officers most of the gardeners and nurserymen, and several zealous and wealthy amateur horticulturists of Baltimore. They propose to hold weekly exhibitions, to which members and their families are admitted, and in June next their first grand public Exhibition is to be held.

MARKET GARDENING AROUND LONDON.

GENERAL REMARKS TOUCHING ROTATION OF CROPS, &c.—If we take a five-acre piece of ground, say in November, we shall find it full of cabbages, which being planted out about the 25th of October, will be strong healthy plants. The moment these are off, the land is again trenched and cropped with early celery, in well dunged trenches six feet apart, with two or three rows of lettuces or coleworts in the middle; for market gardeners do not mould up celery until it is very large, (often eighteen inches high,) so there is plenty of time for a crop of cabbages, coleworts, or lettuces, to come to maturity. When the celery is removed, the ground is cropped with winter greens, and again cleared off; for nothing pays so well as the London greens or young unhearted cabbages. In November Mr. FITCH, of Fulham, has often upwards of twenty acres of these, besides twenty acres of cabbages; every hole and corner under trees, and all spare places being full. When the five-acred piece is cleared of coleworts, say by the first of March, it is again dunged and trenched and sown with onions, and very often lettuces are planted in the beds as well as in the alleys. When the onions are off, the ground is trenched and planted with cabbages or coleworts, &c.; next spring a crop of cauliflowers, gherkin cucumbers, French beans, or scarlet runners, is taken off; but the grand point in the course of rotation, is to be continually sowing, and whatever plants are ready when the ground is empty to plant these. The land can well sustain so much cropping on account of the heavy dungings, trenchings, and hoeings which it receives. If you ask a market gardener what is to succeed this or that crop, the answer is, "Don't know, it depends upon what is ready for planting." Continued trenching two spades deep for any crop seems expensive; but a strong Irish laborer will turn over from twelve to fourteen rods a day, with comparative ease; and I may here state that if it were not for the Irish laborer, the prices of vegetables would be much higher. Market gardeners know that after an active crop the top soil for several inches deep is entirely exhausted, and hence the reason for continual trenching, in order to bring up the top soil that but a few months before had been turned down, with a large proportion of dung, to enrich it and fit it for active use along with the half decayed manure.

Market gardening is well conducted about London, and if young gardeners were to spend only one year with such men as Messrs. FITCH, of Fulham, it would teach them a lesson which would amply repay a twelvemonth's hard labor. They would there be taught how to grow digestible vegetables, and not those stunted blue cabbages and other things that are, in too many cases, huddled up in walled-in gardens. I am almost certain that the day will arrive when the latter will be converted into forcing grounds and when vegetables will be grown in the open fields, which are their proper places. If a farmer were to send his son to be a laborer in a market garden for a year or two, the value of such a school to such a man in after life would be great to himself, his landlord, and to the country at large. The expensive system of a market garden would not be required in a farm; it could not be maintained; but it would show him that one acre cultivated by the spade is equal to five by the plow. We know that some market gardeners use the plow; but how does it pay? Their things are always the last sold, and that for the most part to the hawker, whose name will tell the price obtained. It is, however, necessary to have a scarifier plow in all market gardens, in order to tear up the earth after the carts in wet weather.

Some years ago I took the late Mr. SMITH, of Deanston, over Messrs. FITCH's grounds. Till then he had no knowledge of the enormous expenses of keeping a large garden. "I have not seen," said he, "on the whole 150 acres, a weed; all the ground exhibits a fine level surface; every inch is cropped; all the paths regular; the cart-roads in good order; the hedges of the boundaries very dwarf; no ditches, and all the large plantations of apples, pears, and plums, amounting to fifty acres, with every young shoot made during the summer, pruned down to a couple or three buds from last year's wood." Pruned after the manner of currant bushes, they look well, and bear enormous crops. The ground under the tree is all cropped with rhubarb, currants, gooseberries; and during the winter with coleworts and cabbages. I have seen eight acres of cabbages in seed beds, after the rest are all picked out for spring cabbages. Every spare piece of ground is filled; when the asparagus haulm is cut down, the ground is forked over, and all planted with coleworts, alleys and all; and when the rhubarb leaves die down, this ground is also filled: so that altogether, besides the other crops, there must be several hundred thousand heads of greens for winter market. All liquid manure from dunghills is collected into a large tank; this is conveyed to and distributed over the ground before digging; but the great objection to the use of sewage water after the crop is in, is that it fills up the pores of the earth, cements the mold, and prevents heat and air from acting on the roots.

Some market gardeners keep large herds of pigs, which live night and day among the hot dung, and subsist upon the corn that they pick out of the straw and dung, as well as on green food. Mr. FITCH keeps twelve horses, whose whole employment is to cart goods to the various markets, bring home dung, and convey it to vacant pieces of ground, which occur every week. The carts and wagons in use in market gardens have generally broad wheels. The wagons are very large, and the carts will hold as much as a Suffolk wagon. The laborers employed by Messrs. FITCH on 150 acres, amount to about 70 during winter, and in summer to about 150. The rent per acre is from 9*l.* to 10*l.*, the tithes being from 10*s.* to 12*s.* per acre. Men's wages are 2*s.* per day; women, from 1*s.* to 1*s.* 6*d.* Some idea of the amount of labor in small matters will be conceived, when I state that the whole of the frames, amounting to 1000 lights, are all painted and repaired every autumn. The whole of the hand-lights, 4000 in number, are also repaired; and every description of vegetable is washed before it is sent to market. When men are at piece-work, they receive 2½*d.* per rod, for trenching two spades deep; thus an acre highly manured, using cart-loads instead of barrowfuls, and trenching with spade, instead of shallow digging, or what is worse, using a plow, pays just in proportion to the way in which it is treated.—*J. Cuthill, in London Gardeners' Chronicle.*

☞ Will some of our correspondents favor us with a description of a first rate *Fruit Market Wagon*, with cost, &c.?

Ladies' Department.

THE SEASON OF FLOWERS.

The storms and frosts of another season are almost at an end. Old Winter, with his stern countenance and whitened locks is retreating before the smiling face of Spring. Soon her glad and welcome song will be heard—

"I come, I come! ye have called me long,
I come o'er the mountains with light and song!
Ye may trace my steps o'er the wakening earth,
By the winds which tell of the violet's birth,
By the primrose-stars in the shadowy grass,
By the green leaves, opening as I pass."

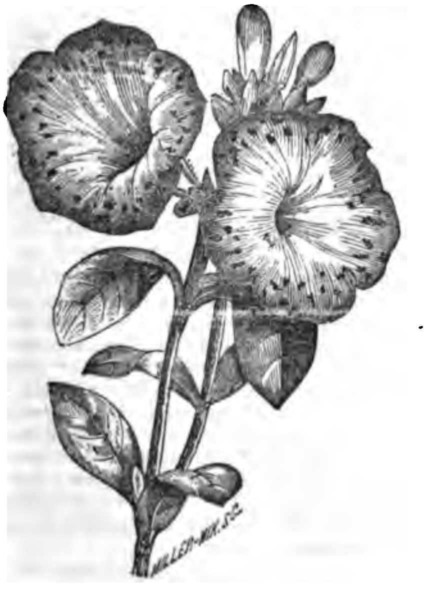
Her arrival is hailed by singing birds and smiling flowers. All love Spring and flowers. The child delights to gambol on the green and stops to admire and pluck the daisy and the dandelion. The youth loves to present to his idol these beautiful emblems of innocence and loveliness. And what more fitting—

"They were born to blush in her shining hair."

Those who have felt a sad pleasure in adorning the dearly loved and early dead with these mementoes of beauty and frailty can appreciate the words of Mrs. Hemans:

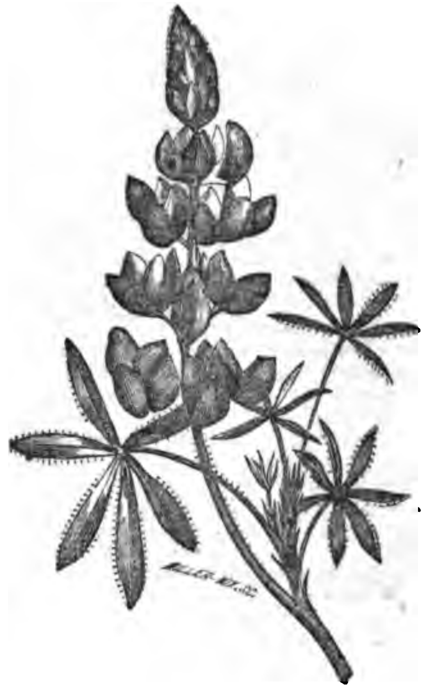
"Bring flowers, pale flowers, o'er the bier to shed,
A crown for the brow of the early dead!
For this through its leaves hath the white rose burst,
For this in the woods was the violet nursed!
Though they smile in vain for what once was ours,
They are love's last gift—bring ye flowers, pale flowers."

A little knowledge and skill is necessary in the cultivation of flowers, and many from the lack of this knowledge find the results of their efforts rather unsatisfactory, and become discouraged. Some with little time attempt to cultivate flowers that require much care, consequently their flowers fail, when if a different selection had been made their labors would have been well rewarded. We shall devote this department during the spring to descriptions of flowers and their cultivation.



PETUNIA PUNCTATA.

The **Petunias** are trailing or spreading plants of almost every variety of color, from white to purple. When a number are planted together in a bed, they intermingle and form masses of great beauty, and no dry weather injures them. They keep in blostill they are destroyed by frost. Plants may be procured at the green-houses, or may be raised from seed. The Petunia flowers the first year from seed, but fine varieties are propagated by cuttings, as the seed will not produce flowers similar to the parent.



DWARF LUPIN.

The **Dwarf Lupin** is another fine flower. It bears leaves cut so as to somewhat resemble expanded fingers. It is about a foot in height, and bears long spikes of blue flowers. The seed shoud be planted where the flowers are to remain.

Phlox Drummondi is a pretty dwarf annual that remains in blossom every day the whole season, and we know of no annual that makes a more brilliant appearance when planted thickly in a bed. They are of all shades of pink and purple.

Portulacca is a very showy succulent spreading annual that loves the hottest and dryest weather. They grow almost as readily as weeds. There are four varieties, scarlet, pink, yellow and white.

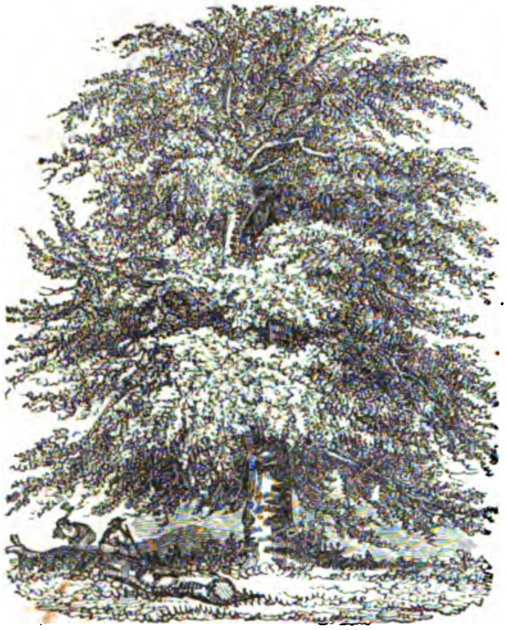
Ten-Week Stocks were our favorites from childhood. Easily cultivated, coming rapidly to maturity, free and almost constant bloomers; of every shade of color, from white to the darkest and richest purple; they are entitled to a place in every collection of flowers.

These all blossom the same season they are planted, and with only ordinary care. Desiring to encourage a taste for the cultivation of flowers among our fair readers, which does so much to make home pleasant, we will furnish any who may apply in season, with a small collection of seeds that with a little care will make their gardens "blossom as the rose," till Winter again with his icy hand suspends all vegetable life.

Youths' Department.

FOREST TREES.

There are few objects in the vegetable world really more interesting and beautiful than the noble forest tree. The **Elm**, with its graceful, drooping branches, is one of the most elegant of forest trees.



THE BEECH TREE,

as may be seen by the engraving above, is truly a fine tree, and were it not so common its noble appearance would be more generally appreciated. The **Oak** has always been held as the emblem of majesty and strength. It is one of the most magnificent, as it is one of the longest-lived of the forest tribes, and its timber is valuable for its strength and durability. A variety called the *Live Oak*, an evergreen which grows at the south, is esteemed the most durable timber for ship-building.

* * *

Have Courage to discharge a debt while you have the money—to do without that which you do not need—to speak your mind when it is necessary, and hold your tongue when it is prudent you should do so—to speak to a friend in a seedy coat, even though you are in company with one richly attired—to own you are poor, and thus disarm poverty of its sharpest sting—to make a will and a just one—to "cut" the most agreeable acquaintance you have, when you are convinced that he lacks principle. "A friend should bear with a friend's infirmities, but not with his vices"—to show your respect for honesty, in whatever guise it appears, and your contempt for dishonesty and duplicity, by whomsoever exhibited—to wear your old clothes until you can pay for new ones—to obey your conscienc at the risk of being ridiculed by men—to wear thick boots in the winter, and in every prefer comfort and propriety to fashion, in all things.

How to Make a Fortune.—Take earnestly hold of life, as capaciated for, and destined to a high and noble purpose. Study closely the mind's bent for a labor or profession. Adopt it early, and pursue it steadily, never looking back to the turned furrow, but forward to the new ground, that ever remains to be broken. Means and ways are abundant to every man's success, if will and action are rightly adapted to them. Our rich men, and our great men, have carved their paths to fortune and fame by this eternal practice—a principle that cannot fail to reward its votary, if it be resolutely pursued. To sigh or repine over lack of inheritance, is unmanly. Every man should strive to be a creator instead of inheritor. He should bequeath instead of borrow. The human race, in this respect, want dignity and discipline. It prefers to wield the sword of valorous forefathers, to forging its own weapons. This is a mean and ignoble spirit. Let every man be conscious of the God in him, and the providence over him, and fight his own battles with his own good lance. Let him feel that it is better to earn a crust, than to inherit coffers of gold. This spirit of self-nobility, once learned, and every man will discover within himself, under God, the elements and capacities of wealth. He will be rich, inestimably rich, in self-resources, and can lift his face proudly to meet the noblest among men.—*N. Y. Sun.*

* * *

The Young Man's "I Cannot."—You cannot! yes you can sir; everybody can, and you amongst the rest. That's a fine way to talk at this time of day. You are young, your limbs are strong, your energies are all laying fresh in the chambers of your nature like the stores of a ship just launched for the voyage of life; all the world is before you; there is little of it behind you, and that you have skipped and played roll hoop over. Yes, young man you *can*, so never let that declaration of cowardice and weakness "I cannot" pass your lips. I do not qualify the infinitive of the verb active that describes your capacity. You can "do anything that has been done, may be done, or should be done," either in the world of physics, morals, or metaphysics. You can rivet a bolt, tear up a furrow, overturn an empire of falsehood, or produce a new idea. God grants you amongst the abundance of his beneficient possibilities one of those humanizing faculties; and you can if you will, make youi one faculty, however apparently humble, a blessing to yourself and to humanity.

* * *

Discontent.—Discontent is a sin that is its own punishment, and makes men torment themselves: it makes the spirit sad—the body sick—and all the enjoyments sour; it arises not from the condition, but the mind. **Paul** was contented in prison;—**Ahab** was discontented in a palace; he had all the delights of Canaan, that pleasant land, the wealth of a kingdom, the pleasure of a court, the honors and powers of a throne; yet all this avails him nothing without **Naboth**'s vineyard. Inordinate desire exposes men to continual vexations, and being disposed to fret, they will always find something to fret about.—*Matthew Henry.*

* * *

Want of a Pursuit.—A man without predominant inclination is not likely to be either useful or happy. He who is everything is nothing.

Editor's Table.

Pennsylvania State Agricultural Society.—A State Agricultural Society has been recently established in Pennsylvania. We believe the farmers of Pennsylvania are waking up to their true interests, and we anticipate much pleasure in meeting the intelligent yeomanry of Pennsylvania at the first Annual Fair.

Sale of thorough bred Short Horn Stock.—Mr. Vail of Troy, so well known as an importer and breeder of fine cattle, intends to sell at public auction a part of his fine herd of Short Horns, on the 20th of June next. We shall publish Mr. V.'s advertisement with particulars in the next number.

We have received, and shall give in our next, the list of premiums for the next State Fair, to be held at Rochester, September 16, 17, 18 and 19th of the present year.

ANSWERS TO CORRESPONDENTS.

Messrs. Editors:—For one, I have determined, during our long winter evenings to pursue such a course of reading as shall enable me to practice our noble art understandingly.

My object in addressing you, is to enquire what books I shall procure to obtain a good knowledge of Scientific Agriculture, without the aid of a teacher. If you should publish in the Farmer a list of such books as would comprise a proper course of agricultural studies, I presume you would confer a favor on many others of your readers as well as me. P. C. Reynolds.—*Manchester, N. Y. February*, 1851.

A knowledge of Chemistry and Geology is of great service to the cultivators of the soil. This can be obtained by any young man from the books used in the schools without the aid of a teacher. Silliman's School Chemistry is perhaps the best on this subject. Sufficient knowledge may be gained by study and care in a short time. On Chemistry, as applied to Agriculture, we would recommend *Johnston's Catechism* of Agricultural Chemistry and Geology, and Norton's Elements of Scientific Agriculture. These are small books, costing together but 75 cents, and containing less than 300 pages. As soon as these are mastered, the young man will have more knowledge of the philosophy of Agriculture, than nine out of ten of the farmers in the world, and be prepared to understand Johnston's *Agricultural Chemistry*, and *Boussingault's Rural Economy* These two works will cost $1,25 each, and will furnish matter for profitable study during a leisure moment for many years, and will be worth more than their cost as books of reference, till the eyes of our young friend grow dim with age.

J. P., *Pomfret.*—We should think *Emery's Corn Planter*, would answer your purpose well. It can be procured at Albany, Rochester, or at any place where a general assortment of agricultural tools are kept. Price $15.

J P J., *Winfield, Her. Co., N. Y.*—The State Transactions are distributed by the State to the County Agricultural Societies, and by them distributed, as premiums, &c. Perhaps the County Societies do not in all cases make good use of these volumes, but the farmers are themselves responsible. Every farmer is responsible for the character and efficiency of his county Society. The Transactions are sold at about $1.25, which is not half the trade price of such a book, and can be had in Albany or Rochester.

R. W. L., *Elgin, N. Y.*—Buckthorn plants are sold at the nurseries at from $8 to $10 per 1000.

N. E., *East Liberty, Ind.*—Sub-soil Plows cost full rigged, $15.

To Officers and Soldiers of the Revolution, their Widows and Heirs.

FOUND, about the 1st of January, 1851, a large quantity of the old original records of the services of several thousand *Officers*, (in the Commissary and Quarter-Master's Department,) *Surgeons, Artificers, Wagon Conductors, Wagoners, Teamsters, Carpenters, Blacksmiths, Boat Builders, Fatiguemen, &c., &c.*, in the war of the Revolution. These records have been preserved by descendants of Officers, and are admitted as authentic in establishing claims against the Government. Officers, soldiers, their widows, or heirs, who have omitted to assert their claims, or failed to obtain their just dues, when application has been made, for want of evidence or assistance in prosecuting their claims, are informed that the subscriber having been engaged for nearly ten years past in prosecuting claims for Pensions, Bounty Lands, &c., collecting documents and statistics relating to the Revolution, he is prepared to aid, promptly and vigorously, all persons who require the assistance of an agent or attorney in prosecuting claims before Congress, or any of the departments at Washington.

Persons, or the widows of such as served in the capacity of either class above named, *who have been pensioned*, will find it to their interest to send a statement of facts to the subscriber, as but few of those received what was justly their due.

Letters of inquiry or application should be addressed to the subscriber, *post-paid*, at Washington City, D. C.

February, 1851. WILLIS G. WADE.

Fruit Scions for 1851.

THE subscriber will furnish Scions of the justly celebrated Fruit of Western New York, of the different varieties mentioned below.

Northern Spy,
Norton's Melon,
Early Joe,
Baldwin,
Ribston Pippin,
Red Canada,
Gravenstein,
Red Astrachan,
Lowel,
Dyer,
Porter,
Fameuse,
Yellow Bellflower,
Wagener,
Swaar,
Westfield Seek-no-further,
Rambo,
Esopus Spitzenberg,
Roxbury Russell,
Autumn Strawberry,
Green Sweeting,
Munson Sweeting,
Talman Sweeting,
Summer Rose,
Early Harvest,
Hawley or Douse,
St. Lawrence.

I will pack and send, at One Dollar per hundred, either by mail or express.

I refer to Mr. Vick, of the Gen. Farmer. All orders must come post paid.

Virgalieu, Osband's Summer, Onondaga or *Swan,s Orange*, pear Scions, at Three shillings per dozen.

☞ In all cases where it is possible, I will send specimens of the *Northern Spy* apple. JAMES H. WATTS.

Rocheste, Feb , 1851.

For Sale.

A FARM in the easterly part of Walworth County, Wisconsin, on the Plank Road leading from Racine to Jamesville. Said Farm is well located in a healthy, pleasant and thriving part of the State, and is well calculated for a large farm, or it can be conveniently divided into three or more small ones, and each supplied with wood and water. The general surface has an inclination south and east.

In the centre, where the buildings are now located, there are four or five hundred Fruit Trees of the various kinds. Some have commenced bearing, so that the occupant now enjoys a comfortable supply of delicious fruit.—There is about two hundred acres under the plow. In fact, so far as good roads to important places, mills, school houses, nurseries, &c., are concerned, this place is as well located as one could desire.

But as no one will purchase upon the strength of this notice without first viewing the place, it will only be necessary for one to call and satisfy himself, when a trade can be made on accommodating terms. Any information can be obtained in reference to the same by addressing A. G. COLE, at Burlington, Racine County, Wisconsin. February, 1851.

DENTAL NOTICE.

AS it has been currently reported that I have left the business and the office has passed into other hands, I would beg leave to state to my friends and the public, that I am yet to be found at my office in the Emporium Block during week days from 7½ A. M. to 5½ P. M., in every way prepared to insert the latest improved Mineral Teeth on California Gold, in a style of finish not to be surpassed in the State, and to fill decayed natural teeth so as to preserve them during life. All of which work is warranted not to fail.

Morgan's Premium foil, *Gold and Tin*, at all times on hand for sale.

☞ Office, No. 6, second floor, Emporium Block, corner North St. Paul street, Rochester, N. Y.

March, 1851. ANSEL A. MORGAN.

Monroe Nursery.

THE subscriber deems it almost superfluous to publish an advertisement at this time, from the fact that his Nursery is so universally known; yet he would beg leave to say to his friends and the public, that his experience as a Nurseryman of eight years is certainly some guaranty that the articles purchased of him would be correct and adapted to modern cultivation. Of the different fruits, he only cultivates a few varieties, such as has been proved and acknowledged to be the best.

He has a good stock of Apple, Pear, Peach, Apricot, Grape, Shrubs, Tuberous, Bulbous and green-house plants at reduced prices. Dahlias also of latest varieties.

Greece, March 1, 1851. [3-3t.] CHAS POWIS.

THE GENESEE FARMER,

VOLUME XII, FOR 1851.

Fifty Cents a Year, in Advance.

Five Copies for $2; Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ Post-Masters, Agents, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post-paid or free,) at the risk of the Publisher. Address to

DANIEL LEE,
Rochester, New York

December, 1850.

THE NEW YORK REAPER.

MANUFACTURED BY SEYMOUR & MORGAN.

THE undersigned after many years experience in the manufacture of the different Reapers heretofore used, are at last, by the application of new principles lately patented, and to which they have the exclusive right, prepared to offer to the farmers of the United States a

PERFECT REAPING MACHINE,

which in durability of construction, perfect manner of cutting grain and the ease with which it may be worked, *has never been* equalled.

The following are some of the advantages possessed by this Machine over any other heretofore used:

1. The Finger-piece is placed within the circumference of the driving wheel, and the other ground wheel placed nearly opposite, and greatly increased in size, which lessens the power necessary to work the machine at least one-third, and does away with all difficulty in backing and turning.

2. The method of changing the cut is so improved that it can be done instantly on the small ground wheel by means of a lever, and on the driving wheel in much less time than in any other Reaper.

3. The sickle or knife is constructed of patent hollow teeth which CANNOT BE CLOGGED, and which in case of accident can be repaired by any good blacksmith without the least difficulty.

4 The man is placed on the backside of the platform where he has his work directly before him and is capable of performing it in a perfectly natural and easy manner, when compared with the old way of stretching from behind the gearing, with his back towards the team.

5. The gearing is of new and improved construction, combining GREAT STRENGTH AND DURABILITY with perfect simplicity of arrangement, and possesses *Great Advantages*, in many respects, *over all other* similar machines.

We are now manufacturing several hundred of the above Reapers for the Harvest of 1851, and are prepared to receive orders of purchasers for the same Our terms of sale, warranty, &c., will be *as favorable as ever*, and we shall spare no pains to make our work satisfactory; as we are

BOUND TO KEEP AHEAD

of all other manufacturers in the quality of our Machines. We will cheerfully give further information to any one who may address us personally or by mail. SEYMOUR & MORGAN.

Brockport, N. Y., Feb., 1851.

We would here take occasion to refer to a difficulty with C. H. McCormick, growing out of the fact, that we last year manufactured *and sold* a Machine of our own getting up, instead of paying him a patent fee for the privilege of making his "Virginia Reaper" which had been thoroughly tested, and found to be very unpopular with a large portion of the farming community.

The Machine made by us did not in the slightest particular infringe upon any patent of the said McCormick, but the plea was made use of as a bug-bear with which to frighten farmers from the purchase of our Machines, hoping thereby to dispose of some portion of a large number of Virginia Reapers which are now scattered throughout the country (condemned) and now unsold. The Machine we are manufacturing contains none of the parts complained of as infringements, which was only in the position of the Raker; having now placed our Raker in a more favorable position that matter of dispute is done away with and no person need fear the complaints of the maker of the "Virginia Reaper" as he will naturally feel sore that he can no longer monopolize the business of manufacturing Reapers to the great damage of all interested except himself.

The following are extracts from Letters received by us:

West Liberty, Logan Co, Ohio, Aug. 1, 1850.

Gents:—It is with satisfaction that I inform you that the Reaper I purchased of you, performed equal to my highest expectations, and I think it can justly claim precedence over either Hussy's or McCormick's, not only in the construction of the machinery but also in the manner in which it cuts, and performs its work The greatest improvement is in the cutting apparatus which is far superior to any other in use here, and is just what has long been wanted. All who have seen your Machine have expressed for it a decided preference to any other. Yours, respectfully,

J. P. Buffington.

Urbana, Cham. Co., Ohio. Oct. 18, 1850.

Gents:—I bought one of your Reapers for last harvest, and cut my own harvest of about 150 acres with it. The Reaper performed to my entire satisfaction; it will cut wet and grassy grain and corn stalks without choking. I have seen all the other kinds of Reapers work and believe yours to be the best Reaper ever introduced into this State. Yours, &c., Andrew McBeth.

Covington, Wyoming Co., N. Y., Aug. 10, 1850.

Messrs. Seymour & Morgan—Gents:—We have just finished cutting our wheat, and a very bad harvest we have had, it being bad weather and our wheat very badly lodged down, notwithstanding your Reaper has done well, taking up our lodged grain beyond our expectations, we think it a good way to cut grain doing it with less expense than any other way.

Yours, respectfully, James Gay.

Janesville, Wisconsin, Nov. 1, 1850.

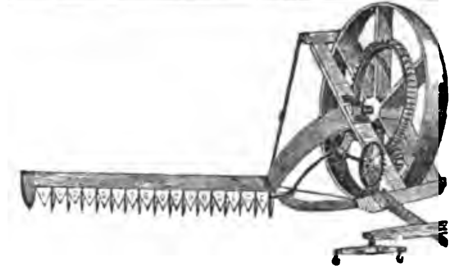
Messrs. Seymour & Morgan—Gents.—I own one of McCormick's, one of Hussy's, and one of your Reapers; upon giving each a fair test the present season I found that where both others clogged so that it was imposible to use them, yours worked like a charm; and I have no hesitation in pronouncing it much the best in use.

Freeman Hitchcock.

Urbana, Cham. Co., Ohio, Oct. 19, 1950.

Messrs Seymour & Morgan—Gents:—I purchased one of your Reapers for last harvest. I have seen the different kinds of Reapers work and consider yours far superior to any other.

Yours, &c., Emanuel Shoupe.



KETCHUM'S PATENT MOWING MACHINE.

THE subscribers having purchased the entire interest of the inventor, Mr. Wm. F. Ketchum, and also the interest formerly owned by S. W. Hawes, are now manufacturing the above Machine in the city of Buffalo. The Machine has been greatly improved, and is fully capable of performing all we recommend it to do, and capable of cutting 12 to 15 acres of grass per day with 1 span of horses

The price of the Machine is $100.00 with one sett of knives, and $110,00 with two sett of knives.—Cash in Buffalo.

Any information wanted, or orders left with Mr. George Sheffer, Scottsville, Monroe Co., or Mr. Morgan Butler, New Hartford, Oneida Co., will meet with prompt attention.

February, 1851. G. W. ALLEN & CO.

C. J. RYAN & CO.,

WOULD most respectfully call the attention of the public particularly the trade, to their Nursery Stock, consisting in part as follows:—

Apple Trees, 3 and 4 years old, all the most popular long keeping varieties,..............................$18 per 100.

Northern Spy, 3 and 4 years old...............$25 per 100.

Cherry Trees, the principal varieties, from 5 to 10 feet high, straight stems, and headed.......................$20 per 100.

Hedge Plants.—Arbor Vitæ, American, 1 to 4 feet high, $5 per 100; Hemlock Spruce, 1 to 4 feet high, $5 per 100; Privit, strong thrifty plants, $4 per 100.

5000 Giant Rhubarb Roots, fine productive sorts, for hotels and market gardeners..............................$10 per 100.

Myatt's Victoria Rhubarb, *true sort*..............$4 per doz.

Downing's Colossal, extra fine flavored and tender .$4 per doz.

1500 select and very choice Verbenas, in fair condition for bedding out, such as Anacreon, Scarlet Defiance, Polka, Lovell, Rosy Morn, and a dozen other varieties,.............$1,50 per doz.

2000 Petunies, all the best self and varigated colors, strong and thrifty plants,........................$1,50 per doz.

500 Double White Feverfews, fine for planting in beds or borders..................................$1,50 per doz.

Also, Buddlyas, Salvias, Neirembergias, &c., in large quanties at low rates

1000 Scarlet Geraniums, dwarf varieties, best adapted to beds..$2 per doz.

5000 Prize Double Dahlias ☞ at low rates.

A great improvement on any before offered—75 varieties of them are those which attracted unusual notice in Reynold's Arcade, Rochester last year, and obtained the first class prizes wherever exhibited.

60 still newer and finer varieties have been added the last autumn at great expense and are now under extensive propagation—will be ready for delivery in pots 1st May.

☞ Roses on their own roots.

A superb collection of Hybrid Perpetuals, Noisette Tea, Bourbon, Bengall and Prairie Running Roses, cultivated largely.

☞ Rochester and Charlotte Plank Road Nurseries, Rochester, N. Y. City Office, 16 Reynold's Arcade, Rochester, N. Y.

March 1st, 1851

1851 ROCHESTER 1851

STAINED GLASS WORKS.

I AM now prepared to produce upon Glass, the copy of any *Design, Picture, Figure or Ornament*, ancient or modern, Enamelled, Embossed, Painted or Stained.

Lead Sash, and Diamond Glass, for church or cottage windows, supplied to order. M. F. REYNOLDS.

February, 1851

GUANO.

WE are in daily expectation of arrivals of Peruvian Guano. Those wishing to order, will do well to do so at the earliest moment. A. B. ALLEN & CO.

New York Agricultural Warehouse and Seed Store, 189 and 191 Water street. [2-3t-o]

GREAT BOOKS
FOR FARMERS, GARDENERS AND HORTICULTURISTS,
AND A
RARE CHANCE FOR AGENTS TO MAKE MONEY.

JOHN P. JEWETT & COMPANY, Publishers, Nos. 17 and 19 Cornhill, Boston, take pleasure in announcing to the intelligent Farmers, Gardeners, and Horticulturists of the United States that they have at length completed their valuable collection of works on Agriculture, and its kindred sciences, and that the two last of the series are now in the hands of the stereotypers, and will be ready for delivery to subscribers and others, on or before the first day of March. The two volumes now in press are, first—

BRECK'S BOOK OF FLOWERS,
By Joseph Breck, Esq., of Brighton,

For many years editor and publisher of the New England Farmer, and one of the most distinguished Florists in America. This volume contains the results of the practical experience of a man of taste and science, and is, without doubt, the most thorough and reliable book on the cultivation of flowers, and the laying out of flower gardens, to be found in any language; it is emphatically the Ladies' and Gentlemen's complete Floral Vade Mecum. This book will be in 12 mo. form, containing about 386 pages, fine cloth binding, and we have determined to sell it at 75 Cents, to bring it within the means of all, and to ensure a large sale; as it is a book which every lover of flowers must own.

The second in the series is—

THE KITCHEN GARDENER'S TEXT BOOK,

By one of the most distinguished Gardeners of New Jersey. This is truly a practical work, avoiding useless, and to the masses, unmeaning technicalities, the author handles his subjects with the skill of a thoroughly versed, common-sense practitioner. With the aid of this volume, the merest Tyro may rapidly advance through the various stages of Horticultural knowledge, to complete success. A simple, practical and cheap work on this subject has long been needed. The price of this book will be 50 Cents, —12 mo., 216 pages, handsomely bound in cloth.

The third book is—

A TREATISE ON HOT-HOUSES,
By Robert B. Leuchars, Garden Architect.

This work, by Mr. Leuchars, who is one of the most distinguished among the many Scotch Gardeners of America, is a practical treatise on the CONSTRUCTION, HEATING AND VENTILATION OF HOT-HOUSES, including CONSERVATORIES, GREEN-HOUSES, GRAPERIES, and other kinds of *HORTICULTURAL STRUCTURES*, with practical directions for their management in regard to LIGHT, HEAT AND AIR. Illustrated with more than *Seventy Engravings*. This is the first and only work of this kind ever published in this country or in Europe, and is recommended very highly by Professors Silliman and Dana, of Yale College, and by many other scientific gentlemen. Price One Dollar. It is a very learned work, and an invaluable one to any person who owns, or who intends to erect, either of the structures upon which it so ably treats.

The fourth book is—

MR. COLE'S GREAT WORK ON

THE DISEASES OF ANIMALS,
OR THE AMERICAN VETERINARIAN,

30,000 copies of which have already been sold, and the sale of which continues in a manner almost without a precedent. To every man who owns a horse, a cow, a pig, or even a hen, this work by Mr. Cole is of more value than ten times its cost.

The lives of many valuable animals have already been saved by following Mr. Cole's plain directons for their treatment when sick. This is the cheapest work of the kind ever published in America, being but 50 CENTS at retail, and we do not believe that any farmer would willingly be without it, if placed within his reach.

The fifth book is—

MR. COLE'S OTHER VALUABLE WORK,

THE AMERICAN FRUIT BOOK,
OR, FRUITS AND FRUIT TREES OF AMERICA,

18,000 of which have been published in less than two years.

This beautiful and thorough work is illustrated by over 200 engravings, of Apples, Pears, Peaches, Plums, Cherries, Grapes, Raspberries, Gooseberries, Currents, &c., &c., and the various Fruit Trees of our own country; also, cuts representing the various modes of training vines, and the different styles of grafting, budding, pruning, &c. It is a work which, for accuracy of description and reliability, has never been exceeded, if equalled, and contains more than twice the amount of matter of any other Fruit Book published in America at the same price, viz: 50 cents. We could fill a volume with the recommendations of Mr. Cole's two books, which we have received from the most eminent Farmers and Horticulturists of New England, the Middle States and the great West.

A WORD NOW TO AGENTS.

We are now prepared to offer to capable, responsible and energetic Book Agents a chance for making money, such as seldom occurs. With the above five works, an Agent of tact or ability could hardly fall upon a spot so barren that he could not dispose of one or more of these works, and in many cases would sell one of each; and in populous districts, a large number of copies could be sold daily. We intend to district out the New England States, mostly into counties. Also, the States of New York, Pennsylvania, New Jersey, Ohio and the Western States, we should prefer to dispose of to some one individual in each State, for him to district out into sub-agencies.

The books will all be ready for delivery by the 1st of March, and it is important that the various Counties and States should be disposed of before that time. A cash capital of from $30 to $50 will be needed by every Agent for a County, and a much larger sum by a State Agent.

Address, post-paid the Publishers,

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17 & 19 Cornhill, Boston.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

A. SAUL & CO., beg leave to call the attention of *Dealers* and *Planters* of Trees, and the public in general, to their very large and complete stock of

FRUIT AND ORNAMENTAL TREES,

Which they offer for sale the coming spring. The Trees of their Nurseries are all *grown* on the premises and propagated under the immediate supervision of Mr. Saul, whose long connection with this establishment, is some guarantee for the accuracy of the stock now offered for sale. It consists in part of over—

20,000 Pear Trees, 5 to 8 feet high, and embracing all the leading standard varieties, as well as those recently introduced, of merit, either of American or Foreign origin.

20,000 Apple Trees of *extra size*, 8 to 10 and 12 feet high, including every variety worthy of cultivation.

10,000 Plum Trees, 5 to 8 feet, of every known kind of reputation, as well as all the novelties of recent introduction.

10,000 Cherry Trees, 6 to 8 feet and over, among which may be found all the desirable and choice varieties.

A large stock of handsome Peach, Apricot, Nectarine and Quince, in every variety.

Also, Grape Vines (native and foreign,) Raspberries, Gooseberries and Currents, and Strawberry plants, of all the most approved kinds, as well as excellent roots, such as Asparagus, Rhubarb, Sea Kale, &c., &c.

Pear on Quince, Cherry on Mahaleb, and Apple on Paradise stocks—for Pyramids or Dwarfs for garden culture, and embraces all the kinds that succeed on these stocks.

DECIDUOUS AND EVERGREEN ORNAMENTAL TREES AND SHRUBS.

Embracing all the known kinds suitable for street planting of *extra size*; also, the more rare, and select, as well as all the well known kinds suitable for Arboretums, Lawn and and Door-Yard planting, &c., including Weeping Trees, Vines, Garden and Climbing Roses in great variety. Hybrid Perpetuals, Hybrid China, Hybrid Bourbons, Hybrid Damasks, Hybrid Provence, and Bourbon, Tea, China, and Noisette, and Prairie and other Climbing Roses.

A large quantity of Arbor Vitæ for Scrones, Burkthorn, Osage, Orange and other hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere.—For further particulars see catalogues, a new edition of which is just issued, and will be forwarded to all *Post-Paid* applicants by mail. A liberal discount will be made to persons who buy to sell again, and extensive planters on their own account.

P. S.—Frieght paid to New York.

Newburgh, March 1st 1851. [3-2t]

Agricultural Warehouse and Seed Store,
QUINCY HALL, (OVER THE MARKET,) BOSTON.

THE proprietors having recently enlarged their Warehouse, and increased their Works at Worcester, would respectfully invite the attention of planters and dealers in Agricultural Implements, Garden and Field Seeds, &c., to their stock, comprising the largest and best assortment in the United States, which are offered at low prices.

Of Plows we have the greatest variety of kinds and sizes,—Improved Sod Plows for flat furrows,—Improved Scotch do for lapped furrows,—Improved Stubble do, which are especially adapted to deep tillage, and varying from 6 to 12 inches in depth. Self-Sharpening, Hill Side, Sub Soil, Double Mold, Corn, Cotton, Sugar and Rice Plows.

Cylinder Hay Cutters, Smith's patent Lever Gate and others, Patent Corn Shellers, with and without Separators, Seed Sowers of various sizes and prices, Bachelder's patent Corn Planters improved. Fanning Mills of various sizes, Horse Powers, Threshing Machines, Themometer Churns, Robbin's patent Centrifugal do, Cylinder do, Dash do, Corn and Cob Crushers, Corn Planters, together with almost every article wanted on the Plantation, Farm or Garden.

Illustrated Catalogues sent gratis on application, post-paid.

RUGGLES, NOURSE, MASON & CO.

Boston and Worcester, Mass., March 1st, 1851.

To Nursery Gardeners.

A GENTLEMAN wishing to establish a Nursery Garden, desires to enter into arrangements, for that purpose, with a person who understands the business. 8 to 12 acres, or such other quantity as may be required, of excellent land will be furnished, with a comfortable dwelling house, and the use of a Green House, rent free, till the business could yield a return. Situation—Two miles from Kingston, Canada, on the high road. A very moderate capital would suffice.

Apply (if by letter, post paid,) to Messrs. ELLWANGER & BARRY, Rochester, N. Y., or to J. H. W., Kingston, Canada.

February, 1851.

EMERY & CO.'S

NEW YORK STATE AGRICULTURAL SOCIETY'S FIRST PREMIUM

RAIL-ROAD HORSE-POWER & THRESHER.

THE attention of the farming public is solicited to the newly improved Rail Road Horse Power, as now made and offered to them by the subscribers.

Having been long engaged in the manufacture. sale. and introduction of agricultural machinery, they have had ample opportunities to ascertain the wants of the farmers as well as the merits of the various machines now in use—they have endeavored to better adapt such as they manufacture for the purposes designed, and having paid more attention to these Horse Powers than almost all other implements together. they flatter themselves that they have succeeded in so improving the endless chain power as to do away the strong prejudice against its use. and at the same time so adapted it to a greater variety of uses that no farmer of any considerable extent will do without one when once having seen them in operation.

As their power is so dissimilar to those chiefly made and sold by them previous to last season. and from any others now in use, that they deem it an object to themselves, as wel' as an interest to farmers. to give a description of its principal parts with cuts, as follows:

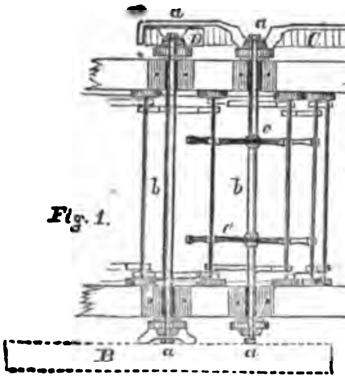
Fig. 1.

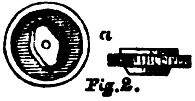

Fig. 2.

Fig. 1 represents the top view of the running geer with the flooring off. A, A, the sills, supporting the bearings and main shafts. B the band-wheel. 3 feet diameter connected to shaft C the converge geer wheel connected to shaft D the pinion working inside the converge wheel and connected to shaft. a, a, a, a. the ends of the main shafts with couplings and nuts attached. b, b, the two main shafts of the power. c, c, the reels (iron) on the forward main shaft which supports the endless platform in its revolution at the forward or upper end of the power. These reels, as also the couplings are all fitted firmly and permantly to the main shafts as represented.

Fig. 2 a represents a face and edge view of the couplings which are fitted permently to each end of each main shaft, (enlarged.)

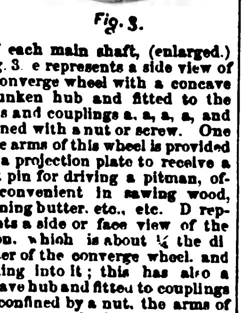

Fig. 3.

Fig. 3. e represents a side view of the converge wheel with a concave or sunken hub and fitted to the shafts and couplings a. a, a, a, and confined with a nut or screw. One of the arms of this wheel is provided with a projection plate to receive a wrist pin for driving a pitman, often convenient in sawing wood, churning butter. etc., etc. D represents a side or face view of the pinion. which is about ¼ the diameter of the converge wheel. and working into it; this has also a concave hub and fitted to couplings and confined by a nut. the arms of the converge wheel passing over it when in operation.

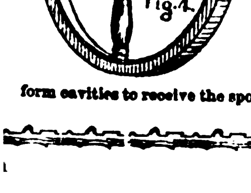

Fig. 4.

Fig 4. B represents a face or side view of the band wheel. three feet diameter. the hub of which is formed of two iron plates so made as to form cavities to receive the spokes as represented, and when bolted through the spokes and plates forms a strong and substantial wheel. The back plate is also concave to receive a nut, fastening and fitting also to each and all the couplings.

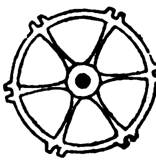
Fig. 5.

Fig. 5 shows the side view of one the reels—two of which are used on the forward main shaft. The small rods of the endless platform, fitting in the cavities as they revolve, thereby giving motion to the reels and shaft, to which they are firmly and permantly fastened.

The diameter of these reels is such that they receive from the platform. with the ordinary walk of a horse, about fifty-five revolutions per minute. which it communicates to the converge wheel outside the frame. This wheel in its turn communicates its motion *in the same direction* to the pinion working into it, which pinion. being only one-fourth the diameter, receives two hundred and twenty revolutions per minute—the band wheel B being attached to the opposite end of the pinion shaft as represented This wheel being three feet diameter gives sufficient speed for threshing, sawing wood. grating apples. ginning cotton, cutting and grinding feed, etc., etc.

When the power is to be used for churning, (with band.) driving grindstones, corn shellers, or when a slower motion is desired. the band wheel can be attached to either end of the reel shaft. at fifty five revolutions per minute. Should it be desirable to have a still slower motion for clevators, hay presses, driving paddle-wheels for small boat, instead of propelling them by manual labor on many of our streams and lakes. in the wood and lumber business, etc.—all that is necessary is to put the pinion on the reel shaft and the converge geer wheel on the other, working into it, and we have a motion of about fourteen revolutions per minute, and with an increased power in proportion to the decrease of motion, the horse walking the same speed in all cases.

The advantages of these arrangements are too plain to require comment—only one or two need be mentioned. one of which is, the removing the whole of the geering from under the horses and from the dust and dirt always about the machines, where it may, if desired. be boxed up and kept perfectly clean, requiring very little oil or care to keep them in order. There is no possibility of breakage. or wear. or slipping of gearing. as is unavoidable in all other powers which we have heretofore sold or seen.

The platform, small shafts, rail-tracks, and wheels, are similar to those made and sold by us for several years past These improvements having been tes'ed in upward of two hundred Horse Powers, made and sold during the last season, and invariably given good satisfaction, and had the preference over any we have before made, we have no hesitation in commending them to the favorable notice and trial by all farmers or others desiring a cheap, efficient, and durable Horse Power. For further particulars see catalogues of "The Albany Agricultural Works, Warehouse and Seed Store," furnished gratis on application to

EMERY & CO.,
369 and 371 Broadway, Albany, N. Y.

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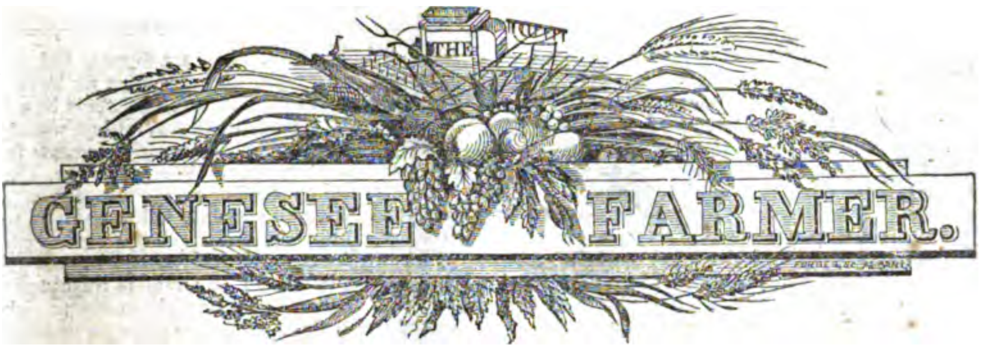


Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—APRIL, 1851. NO. 4.

IMPROVING LANDS IN VIRGINIA.

A GENTLEMAN in Virginia has requested us to write and publish an article on the improvement of the naturally thin or partially exhausted lands of that State. As the fundamental principles of agriculture are the same everywhere, we have no hesitancy in offering a few suggestions to our numerous readers in the "Old Dominion," on the renovation of impoverished fields.

Grass, sedge, briars, wild plums, sumac, and forest trees, are nature's agents for regaining lost fertility on lands which have long been tilled and finally turned out as an open common. The farmer naturally seeks the best ways and means to impart a profitable degree of fruitfulness to lands in this condition. Stable manure in his case is out of the question; for he has neither stock at his command, nor summer or winter feed adequate to fertilize one acre in ten of the old plantation. It must be improved by a less expensive process, or not at all. There are two ways in which the desired result may be attained, either or both of which are open for successful experiment. One is to convert the plantation, in the first instance, into a grazing farm. This may be done without ever putting a plow into the ground. We assure our friends that some of the most profitable farms in the southern tier of counties in the State of New York were never plowed since the primitive forest covered their hills and valleys. One or two crops of wheat or rye are put in by the use of the harrow, after the land is first cleared and burned, when it is seeded with timothy, clover, or herd's grass, and kept in pasture or meadow.

There are but few acres in Virginia that ever bore crops, that will not grow grass of some kind by the use of lime, grass seed, and thorough scarifying with a sharp iron or steel-toothed harrow. After the lime and seed have been applied a week, if the farmer has any doubt as to the strength of the soil, the application of 100, 150, or 200 pounds of Peruvian guano, will secure to the grass plants a fine growth of roots and stems, precisely on the same principle that this fertilizer increases a crop of wheat or oats, which are varieties of grass. Land well set in timothy, clover, or red-top, is half redeemed, and in a condition to yield an income in wool, butter and cheese, beef, mutton, live hogs, mules, horses, and neat cattle. There are millions of acres in Virginia that would make profitable dairy, stock, and wool-growing farms, which now produce next to nothing. This may be done with little or no plowing, if one prefers to operate by seeding, liming, and using in some cases a little guano, in the manner indicated. The quantity of lime which one can afford to apply per acre will depend entirely on the cost of the article, and the probable value of the crop when grown. From five to fifty bushels would be the limits which we recommend. So soon as practicable, every farmer should grow his own clover and grass seed, and be extremely careful to raise clean seed, and to sow no other, We have had considerable experience in growing clover and other forage seeds, and know how sadly a man may be injured by purchasing and using foul seed. A farmer in Virginia who will establish a reputation for growing pure clover and timothy seed, can make a fortune at the business. He must manure well and be familiar with this branch of husbandry.

In plowing with a view to improve land, much depends upon the condition it is in. If it will bear a crop of rye of five, eight, or ten bushels per acre, it should be plowed early enough to seed with rye in September or October, harrowing in a top-dressing of lime or marl with the seed. If one is short of hay or fodder, sheep and calves can run more or less on this rye field during the winter months. A seed of rye, where the plant tillers well in the fall, by the first of May, if not fed, will give in organized matter, from 50 to 75 times its weight. This immense gain is *manure*, drawn in a considerable degree from the atmosphere. If it be turned into the soil by the plow, and peas, with a little more lime be sown, they too will draw fertilizing atoms from the air. Hogs may eat the peas in the field, and the land may be plowed deep, well cultivated with a two-horse cultivator, and sown with wheat in October, which is early enough for central or southern Virginia. If the ground is extremely sterile, plow in the fall deep with a stout team, and let the frosts of winter operate on the minerals before either seed or lime is applied. In the spring, sow lime and peas, and harrow thoroughly. Southern planters, as a general thing, fail to have first rate harrows; and when they do have them, they are not used half enough to do up tillage "brown." It is a good plan to sow a few oats with peas, for they assist in keeping the vines from falling upon the ground, where they frequently rot before the seed is ripe. Let hogs eat both peas and oats, and plow in all vegetable matter with another coat of lime sown before plowing. Now, sow wheat and apply 200 pounds of the best guano per acre, and seed with clover. Give the clover a top-dressing of 100 lbs. of gypsum per acre, and not plow again in two years, if the clover takes well. Unless the clover is quite thick on the ground, sow timothy. It is a point of great importance always to have clean clover, timothy, and herds-grass seed on hand, to sow on every half naked spot on the plantation. In low grounds sow red-top; and be sure to make food for stock to grow every where. An acre of decently managed grass will yield a clear profit of $3 per annum, which is 6 per cent. interest on $50.

The dairymen of New York are making money quite as fast as the wheat-growers; and skilful wool-growers and growers of good carriage horses are doing as well as either. To rear fine mules and roadsters, both for home service and for the cotton growing States, will pay a good profit in two-thirds of the counties in Virginia. Every branch of agriculture can be made to pay the good husbandman a liberal profit in that State. Tobacco culture is now quite remunerative. Grain growing is perhaps less profitable than any other department of agriculture; but even that will give a fair living if properly conducted. In regard to sheep husbandry, we must say that the best grass fed mutton which we have seen in America, came into Washington city from the grazing districts of Virginia. Sheep are remarkably healthy and fine. The native cattle are generally mean, having large long legs, big heads and horns, thick necks, with precious little of good pieces for roasting or steak. Cattle of this character ought to be driven out of the United States, and those infinitely better take their places. First rate milch cows sell at a round profit to the breeders. Lime and gypsum, guano and good husbandry, must give a plenty of good forage the year round.

Among other truly valuable plants, turnips and corn may be cultivated with great facility and in quantities. They will add largely to the stock of manure and the means of enriching the soil. All corn, peas, oats, rye, and barley fed to hogs, mules, or horses, had better be boiled before feeding. With one or two cauldron kettles set in an arch, it could be attended to by the help in the house, and corn, or other small grain cooked with very little trouble or expense. Next in importance to the economical consumption of food, stands the art of saving and skilfully using all the manure produced on the plantation. For this purpose, working mules, oxen and horses, (for all are worked in Virginia,) should be fed in stables or under sheds where their droppings can be saved under shelter and protected from washing rains. All manure should be covered and kept from loss by volatilization and leaching. Manure is the very cream of the soil, and the right use of this cream is what many cultivators do not understand, although they believe they do. We have traveled a good deal over the United Stated for the express purpose of seeing with our own eyes, and learning from practical men who never write for the press, how they manage straw, corn-stalks, and whatever else adds to the compost heap; and, when we say that about half of the elements of fertilty in the organized substances used as manure is lost before these substances are fairly buried in the soil, taking the country together, we are under the truth. We believe it will pay on farms where so much wheat is grown that farmers cannot well consume the straw, to cut it in pieces about six inches long, in large cutting boxes driven by horse-power, and then spread the straw and plow it in. It is apt to make bad work to attempt to plow under long straw, as we know from experience. With cut straw there would be no serious impediment, while the straw, rotting, would yield soluable silicates and all its organic elements for the production of new crops. We say to our Virginia friends, and to our readers everywhere, if you fail to feed the land it will certainly fail to feed you, sooner or later. If corn-stalks were chopped up and covered with earth by the plow, they would rot and greatly enrich the soil. Don't be afraid to trust your common mother, Earth. When she ceases to yield her annual fruits, there will be no place for us bipeds, or quadrupeds on this planet.

So soon as her numerous railroads are completed which are now in progress, Virginia will place her native salt and gypsum at the command of all her farmers. These fertilizers, with the aid of lime, guano, and salts drawn from the ocean, obtained in a way hereafter to be described, will *enable* her to become one of the richest farming States in the Union.

POTATO CULTURE.—THE MALADY.

A CORRESPONDENT of the Boston Cultivator has the following remarks on a topic which eminently deserves the consideration of every farmer:

> MR. EDITOR:—I have perused the address of Dr. LEE before the Hampshire Society at Northampton, with the greatest pleasure, and I am sure, to my own improvement; but there is one thing that I would ask the Doctor, and that is, is he prepared to grow large crops of potatoes free from the rot—while that distemper is wasting the crops around him—by the information derived from chemical analysis, which shows precisely the quantity of alkali contained in the ashes of the tuber after incineration, and by which he has made it appear, that the rot is the consequence of the waste of that article in the soil? If so, he had better turn his attention to the business while the price of sound potatoes is so high. I know of no crop that would pay equal to this, as by his extensive information he need not lay his crop at less than 600 bushels per acre, I presume. But is it not strange, that every one does not see at a glance the futility of such arguments? Let but a congenial season occur the coming spring, and away goes all chemical reasoning on the subject, and we shall all grow sound crops, although another year of mismanagement—according to the above reasoning—has been added to the list of our misdeeds. I speak it reverently, but if the Almighty should see fit thus to visit our infirmities the coming season, I know of no way in which he could so effectually proclaim man's weakness! If the Dr.'s reasoning be correct, our learned friends ought long ago to have taught us by example, and not have confined their labors to precept.

In illustration of the practical part of this potato question, we copy the following remarks from the Patent Office Report for 1845. A writer over the signature of "CHEMICO" (unknown to us) says:

> DR. LEE, a scientific gentleman of New York, who is at present engaged by the New York State Agricultural Society to visit every county in that State, and deliver lectures on agricultural chemistry, in a letter to the edtior of the Albany Cultivator, remarks: "More than one-half of the ashes of potatoes is pure *potash*. A Sugar maple, a grape vine, a potato plant, and an apple tree, needs a soil that abounds in potash. In every town I have found scientific farmers, who by the use of unleached ashes, lime, and plaster, in equal parts, and placed in the hill with the seed, and on the hill so soon as the tops are well grown, have wholly escaped the potato rot, and harvested for several years from 500 to 600 bushels per acre."

Although in writing to the Cultivator we followed the statements of our informants, we regret that we did not reduce the figures one-third before committing them to the press. We have read of crops equal to 1000 bushels per acre, and many of more than 600; nevertheless, a good cause is always injured by statements which appear improbable, if strictly true.— We have paid particular attention to the culture of potatoes from our boyhood till this present writing. No part of the answers sent to the Patent Office from all parts of the United States, in response to 8000 circular letters, has interested us so much as the responses to questions concerning the cultivation and yield of potatoes. In the report recently sent to Congress, of which the joint committee have reported in favor of printing 130,000 copies, Mr. O. C. MOTLEY, of Clatsop Plains, Oregon, near the mouth of the Columbia River, says, under date of December 15, 1850, that "*the average yield per acre*, on manured land, is 400 bushels. Cost of culture ten cents; price at the last harvest $2,75 a bushel; giving $1,100 in cash for an acre of potatoes." We have reliable information that wheat, potato, and turnip crops, are usually excellent in that Territory. Beef is worth from 15 to 25 cents per pound, butter a dollar, and cheese 75 cents. A good dairy cow is worth $75, which is cheap, considering that half her butter for a year will pay for her. Potato crops in Utah are quite as good as those in Oregon. In Iowa, fresh lands rich in decaying sod and potash, have produced an average of 300 bushels of potatoes to the acre. In New England, the average is not over 75 bushels. Let the farmers of Iowa practice after the New England plan of wasting the raw material for making potatoes 50 years, and the soils that now yield 300 bushels of sound potatoes, will produce no more than 75, and they will be extremely prone to premature decay.

To our mind, there is no more mystery about the potato rot, than there is about the rot of an unripe frost-bitten pumpkin; or the rotting of apples and onions. Whatever weakens the organic functions of a living being, no matter whether an animal or plant, nor whether the injury be done by frost or heat, by poison or starvation, the effect is to hasten death and the "rot" incident to it. In the potato malady, the constitutional strength of the plant has been impaired by many years of bad treatment, so that even seedlings fail to possess the same vital force which its own famliy enjoyed ten generations back. A feeble child, afflicted with hereditary scrofula, is past receiving a new and perfectly sound constitution. In a similar manner, plants have different degress of vital force, or constitutional power; so that two seeds of wheat, corn, or "eyes" of potatoes, shall produce very unlike results in offspring, or crops, under circumstances precisely similar. *Changing seeds* is founded on this principle. Too many farmers constantly breed downward instead of upward—deteriorating vital energy in place of improving it. Families of men, and all inferior organizations, are liable to "run out," provided the physical laws of their being are habitually violated. It is not a temporary pestilence that causes the disaster, but the pestilence and premature death are the effects of human action performed through *ignorance*. Man does a thousand things that operate to shorten his own life through ignorance and folly, as well as to induce the potato rot. Instead of regarding this malady and cholera as special inflictions of Providence, they should be treated on scientific principles, as one would treat fever and ague, or as he would create a great smoke in an orchard on a frosty night, to avoid losing fruit when the trees were in blossom. The effects of a killing frost are to be prevented, not cured. So, too, the premature decomposition of potatoes must be prevented, not cured. This prevention consists not merely in supplying a due quantity of potash to the soil where the plant is cultivated, but in carefully avoiding all excess of moisture, all deficiency in good healthy mould, and in clean culture, after every mineral element required by nature to form perfect plants is furnished in proper proportions. On good sod, fairly rotting a mixture of ashes, lime, and gypsum; or ashes and salt, thoroughly incorporated with the soil; we have seen operate most satisfactorily many years.

In the volcanic regions of Utah, Oregon, and California, the soil abounds in alkalies in a peculiar degree; and while the climate of those regions is well adapted to the potato plant, the earth is not less favorable to the growth of starch in tubers, and of wood in the mammoth trees of an Oregon forest. We have said repeatedly, in public addresses, that potash and soda, which so abound in the alkaline springs of the Rocky Mountains, and in those that feed the salt lake of Utah, will one day be brought into the old states to aid in organizing carbon and the elements of water, into starch, oil, sugar, and wood. Potash is now worth five dollars per 100 lbs. for agricultural purposes; and it cannot well be lower, so long as one-third of the earthy matter in a bushel of wheat is pure alkali. Soils that abound in the alkalies, potash, and soda, and in the alkaline minerals lime, magnesia, and ammonia, are distinguished for the magnificence of their forests, provided the climate is not too rigorous. Constitutionally sound potatoes planted in fresh soils, where immense oaks, hickory, sugar maple, elm, and black walnut grow, festooned with grape vines six or seven inches in diameter, have never failed, to our knowledge, to yield satisfactory crops, when properly cultivated. The farmer is bound to comply with all the conditions of nature in maintaining health and fruitfulness, or he has no right to expect either.

The United States census shows that in one county in Georgia, with a population of over 7000, there was not a single death in the year preceeding June 1st, 1850. We venture to affirm that one can not find much decaying vegetable or animal matter in that county to poison either the air or water consumed by its inhabitants. Of course, the land is not rich, the soil being mostly sand, and the forest being exclusively pine.

Mulching Irish potatoes is very useful at the south, and beneficial every where by moderating the extremes of heat and cold and keeping the surface of the earth moist. At the south, a covering of forest leaves is mostly used; at the north, straw is abundant and might, in addition to forest leaves, be spread over the ground between rows and quite up to the stems of the plants. A climate where the thermometer never indicates a higher temperature than 70°, is best for the *solanum tuberosum*. As a general rule, early planting is best, on deeply plowed land abounding in natural mould, strengthened by wood ashes. Some times strong, green manures operates well; but the practice is like giving large doses of calomel in a critical case—it is hazardous. It is a little more difficult to raise a first rate crop of potatoes than of corn or wheat. A strong sod broken in March or the fall, turned handsomely, and manured with well rotted compost containing leached ashes, a little salt and gypsum, will do the business. Much is gained by frequently stirring the earth with the cultivator or plow; but no amount of tillage can form the first small potato from nothing, or from other ingredients than such as Providence has fitted for the purpose. A hill to each nine square feet, placing them three feet apart in the rows both ways, with but little seed in a hill, and not over four or five stems allowed to grow in each hill, has given the cheapest and best crops. If the land is sufficiently dry, hilling up the earth is unnecessary and often prejudicial. Place the seed not in a deep furrow, but on the same level with the surface, taking care that the soil is well pulverized at least six inches below the seed. In covering potatoes when planted, the depth should vary somewhat with the soil and season. The judgment of the farmer must decide in each case. One can afford to give a bushel of potatoes at harvest for a like quantity of good ashes to be used in making the crop.

The following is the composition of the ash of this plant:

	Tubers.	Haulm or Vines.
Carbonic acid,	13.4	11.0
Phosphoric acid,	11.3	10.8
Sulphuric acid,	7.1	2.2
Chlorine,	2.7	1.6
Lime,	1.8	2.3
Magnesia,	5.4	1.8
Potash,	51.5	44.5
Soda,	trace	tra.
Silica,	5.6	13.0
Oxide of Iron,	0.5	5.2
Charcoal and loss,	0.7	7.6
	100.0	100.0

The above analyses were made by M. Boussingault, and are reliable. By deducting the carbonic acid and loss, nearly 60 per cent of the ash of the tuber is *potash*, and the vines are nearly as rich in this mineral.

POTATOES.

In the February number of the Farmer I find some remarks and inquiries in relation to planting large and small potatoes. My father always preferred large ones for planting—at least, those above medium size, and was not particular about cutting them, putting one in a hill. My own experience is this: I have generally *sorted* my potatoes in the fall, feeding out the small ones and reserving the others for family use. In the spring, only the smaller ones of my winter's stock would remain, and these I have used for planting. When, however, I have been apprehensive of coming short, I have supplied myself by cutting from those used for eating, a *chip*, or *slice*, about half an inch thick, from that end of the potato that contains the eyes. The product has always been of good size, as well as abundant, whenever the soil and the season have been favorable. I ought to state, however, that as I purchase most of my winter's supply, the small potatoes that I plant may have been raised from larger seed. What the effect would be, of planting small potatoes raised from *small* seed for several years in succession, I am not prepared to say. Perhaps the result would be degeneracy.

In the spring of 1849, all my seed was such as above described, and yet my crop was good. Some that were planted on a kind of ridge formed of the earth that had been thrown out of a ditch cut through a low marshy soil, were first rate both in size and quantity. In digging the ditch, the first soil that was thrown out, consisting of a black clay muck, was covered with a gravelly clay loam from the bottom of the ditch. The potatoes raised on this soil, from small seed, surpassed every thing raised in the vicinity, and were admired by all who saw them. They were chiefly Mercers, English whites, and Sardinias, or flesh-colored.

Seedlings.—It was at this time that I raised a fine lot of seedlings, consisting of five or six apparently distinct varieties. These I planted in the spring of 1850, in the same garden with some half dozen other varieties, consisting of Mercers, Sardinias, several kinds of white, one of black, and some of a pale red, or flesh-color, known here by the names, Waterbury reds, Sandlakes, &c., very similar to a kind cultivated in some parts of New York, and called by some "Western reds," if not the very same. The soil was a deep, dark, clay muck, with a sandy clay subsoil, very rich and moist. All the potatoes seemed to do well till about the time of flowering, when I discovered indications of disease. The disease did not seem to spread much until the tubers were about half grown, when the leaves appeared to die suddenly, leaving the stems green. Examination was wholly unsatisfactory. I immediately began to dig them; but they decayed so fast that in a few days full three-fourths of them had perished. Some that were sound when dug in the morning, would be partially decayed in the evening, and reduced to a pulp, with a fœtid odor, the next morning. The "Waterbury Reds" withstood the disease best; the seedlings were only second on the list. From a piece of ground that would once have produced twenty-five or thirty bushels, I obtained less than one when I dug them at the close of the season. H.
—*Down East, Feb'y*, 1851.

SMALL POTATOES.

Messrs. Editors:—I noticed an article in your columns, recommending small potatoes for seed. As that does not altogether agree with my experience, I wish to communicate to you the result of an experiment.

I think it best not only to select the large potatoes, but the best part of each should be used for seed. Every seed in the potato commences its growth at the small end, and are matured only as the potato expands and they are brought over its surface by its growth; consequently the eye or seed at the small end has not come to maturity. Who would be willing to run the risk of planting their crop of corn by taking their seed from the small end of the ear, that was not half grown or matured.

The following experiment has been made: Selected large potatoes, divided the eyes as nearly as possible into three equal parts by cutting them crosswise. The pieces next to the stem, or large end, were planted in one row, the middle pieces in another row, and the small ends in the third row. They were all equal in regard to soil and cultivation. At harvest they were dug and kept separate, and each weighed. The difference between those raised from the large ends and the middle pieces were in favor of the former; but the difference between those raised from the large ends and those of the small ends, were in proportion as one and a half tons to the acre in favor of the former. Pleast to make the experiment for yourself. A Subscriber.

Better by far not to start an object, if its pursuit is to be abandoned at the first difficulty.

NEW YORK STATE AGRICULTURAL SOCIETY.

LIST OF PREMIUMS FOR THE ANNUAL SHOW, TO BE HELD AT ROCHESTER, SEPT., 16, 17, 18, & 19, 1851.

CATTLE.

Short Horns.—Best bull over 3 years old, $25; 2d do, 15; 3d do. 5. Best 2 years old bull, 20; 2d do, 10; 3d do. 5. Best 1 year old bull. 15; 2d do, 10; 3d do. 5. Best bull calf. 10; 2d do. Trans & 3. Best cow over 3 years old. 25; 2d do, 15; 3d do, 5. Best 2 years old heifer. 20; 2d do. 10; 3d do, 5. Best 1 year old heifer, 15; 2d do. 10; 3d do. 5. Best heifer calf, 10; 2d do, Trans and 3. Best 3 cows and 3 heifers, the heifers under three years of age, to be owned by exhibitor. 25.

Devons.—Best bull over 3 years old, $25; 2d do. 15; 3d do, 5. Best 2 years old bull. 20; 2d do, 10; 3d do. 5. Best 1 year old bull. 15; 2d do. 10, 3d do, 5. Best bull calf. 10; 2d do, Trans and 3.—Best cow over 3 years old, $25; 2d do, 15; 3d do, 5. Best 2 years old heifer. 20; 2d do, 10; 3d do. 5. Best 1 year old heifer, 15; 2d do, 10; 3d do, 5. Best heifer calf. 10; 2d do, Trans. and 3. Best 3 cows and 3 heifers, as in Short Horns, 25.

Herefords.—Best bull over 3 years old, $25; 2d do. 15; 3d do. 5. Best 2 years old bull. 20; 2d do. 10; 3d do, 5. Best 1 year old bull, 15; 2d do, 10; 3d do, 5. Best bull calf, 10; 2d do, Trans. and 3.—Best cow over 3 years old. 25; 2d do, 15; 3d do, 5. Best 2 years old heifer. 20; 2d do, 10; 3d do, 5. Best 1 year old heifer, 15; 2d do. 10; 3d do, 5 Best heifer calf. 10; 2d do, Trans. and 3. Best 3 cows and 3 heifers. as in Short Horns, 25.

Ayrshires.—Best bull over 3 years old, $25; 2d do. 15; 3d do, 5. Best 2 years old bull, 20; 2d do, 10; 3d do. 5. Best 1 year old bull, 15; 2d do, 10; 3d do. 5. Best bull calf. 10; 2d do. Trans. and 3.—Best cow over 3 years old, 25; 2d do, 15; 3d do, 5. Best 2 years old heifer, 20; 2d do, 10; 3d do, 5. Best 1 year old heifer, 15; 2d do, 10; 3d do, 5. Best heifer calf, 10; 2d do, Trans. and 3. Best 3 cows and 3 heifers, as in Short Horns. 25.

Natives and cross between Natives and Improved Cattle.—Best cow over 3 years old, $20; 2d do. 12; 3d do, 4. Best heifer 2 years old, 15; 2d do, 10; 3d do. 3. Best 1 year old heifer, 10; 2d do. 8; 3d do, 3. Best heifer calf, 3; 2d do, Trans

Working Oxen.—*Over four years old*—Best team of 20 yoke from any county, $50; 2d do, 30 Best team from any town, not less than 10 yoke, 25; 2d do, 20; 3d do, 10. Best yoke of oxen, 20; 2d do, 15; 3d do, 5.

No yoke of cattle competing in teams can compete as a single yoke; nor can a single yoke, competing for premium, be allowed to compete in the county or town teams.

Steers.—*Three years old*—Best ten yoke from any county, $20. Best single yoke, 10; 2d do, 8; 3d do. 3. To boys under 16, training yoke of steers, best, Silver medal; 2d do, Trans. and 3. *Two years old*—Best ten yoke from any county, 15. Best single yoke, 10; 2d do, 8; 3d do, Trans. and 3. To boys under 16, training yoke of steers, best, Silver Medal; 2d do, Trans. and 3. *One year old*—Best ten yoke from any county, 15. Best single yoke, 8; 2d do, 5; 3d do, Trans. and 3. To boys under 16, training yoke of steers, best, Silver Medal; 2d do, Trans. and 3.

Milch Cows.—Best milch cow, $20. The cow to be kept on grass only during the experiment, and for fifteen days previous to each period of trial. The time of trial from 10th to 20th of June, and from 10th to 20th of August.

Statement to be furnished, containing—1st, The age and breed of cow, and time of calving. 2d, The quantity of milk in weight, and *also* of butter, during each period of ten days. 3d, The butter made to be exhibited with the cow. at the Fair, and the statement to be verified by the affidavit of competitor and one other person conversant with the facts.

Fat Cattle.—*Stall fed*—Best pair fat oxen 4 years old. $30; 2d do, 15; 3d do, 10. Best single ox over 4 years, 15; 2d do, 10; 3d do. 6. Best fat cow over 4 years, 15; 2d do, 10; 3d do, 6. Best pair fat steers, 4 years old, or under, 15; 2d do, 12; 3d do, 8. Best single steer, 4 years or under, 10; 2d do, 6; 3d do, 3. Best single heifer, 4 years or under, spayed or not. 10; 2d do, 6; 3d do. 3.

Fat Cattle.—*On Hay and Grass after one year old*—Best pair over 4 years old, $20; 2d do, 12; 3d do, 8. Best single ox over 4 years, 10; 2d do, 6; 3d do, 4. Best cow over four years. 10; 2d do. 6; 3d do, 4. Best pair fat steers, 4 years or under, 12; 2d do. 8; 3d do, 5. Best single steer, 4 years or under, 8; 2d do, 3; 3d do, Trans. Best heifer, 4 years or under, spayed or not. 8; 2d do, 3; 3d do. Trans.

Applicants for premiums on fat cattle, must furnish particular statements of the manner of feeding, and kind, quantity, and cost of food, and all the expenses connected with the fattening; and those offered as grass fed, must have with them the affidavit of the breeder, that they have been fed on grass and hay alone. since one year old. otherwise they will be excluded Animals exhibited in pairs can not compete for single premiums.

Foreign Cattle.—Best Short Horn bull. 2 years or over, Diploma and $15; best heifer or cow, 2 years or over, Dip. and 15. Best Devon bull, 2 years or over, Dip. and 15; best heifer or cow, 2 years or over, Dip. and 15. Best Hereford bull, 2 years or over, Dip. and 15; best heifer or cow, 2 years or over, Dip. and 15 Best Ayrshire bull, 2 years or over, Dip. and 15; best heifer or cow Dip. and 15.

HORSES.

For all work.—Best stallion over 4 years old, $25; 2d do, 15; 3d do, 5; 4th do, Youatt. Best brood mare, (with foal at her foot,) 25; 2d do, 15; 3d do, 5; 4th do, Youatt.

Draught.—Best stallion over 4 years old. $25; 2d do, 15; 3d do, 5; 4th do, Youatt. Best brood mare, (with foal at her foot,) 25; 2d do. 15; 3d do. 5; 4th do, Youatt.

Thorough bred.—Best stallion over 4 years old. $25; 2d do. 15; 3d do. 5; 4th do. Youatt. Best brood mare, (with foal at her foot.) 25; 2d do, 15; 3d do, 5; 4th do, Youatt.

In order to compete in this class pedigrees must be produced, showing the purity of blood of the animals exhibited. None others will be allowed to compete, and the judges are required to reject any horse with which there is not furnished a complete pedigree on the side of dam and sire.

Three years old Stallions and Mares.—Best stallion. $20; 2d do, 10; 3d do, Youatt; 4th do, Trans. Best mare, 20; 2d do, 10; 3d do, Youatt; 4th do, Trans.

Two years old Stallions and Mares.—Best stallion, $15; 2d do, Youatt; 3d do, Trans. Best mare, 15; 2d do, Youatt; 3d do. Tr.

One year old Colts.—Best stallion, $10; 2d do, Youatt; 3d do, Trans. Best mare. 10; 2d do, Youatt; 3d do, Trans.

Matched Horses.—*For the Carriage or Road*—Best pair of matched horses, Dip. and $15; 2d do, 10; 3d do, Youatt. *For Drought or Farm*—Best pair, Dip. and 15; 2d do, 10; 3d do, Youatt. Best 10 pair farm horses, from any one county, to be owned by exhibitors, and in use on farm, 25 (No team competing singly can compete in this class.)

Geldings.—Best gelding, Dip. and $10; 2d do, 8; 3d do, 6; 4th do, Youatt. Best mare, Dip. and 10; 2d do, 8; 3d do, 6; 4th do, Youatt.

Foreign Horses.—Best blood stallion, over four years, Dip. and $10; best brood mare, over four years, Dip. and 10. Best stallion, horse of all work. over four years. Dip. and 10; best brood mare, over four years. Dip. and 10. Best stallion, draught do. over four years, Dip. and 10; best brood mare, over four years, Dip. and 10.

SHEEP.

Long Wooled.—Best buck over 2 years, $10; 2d do. 8; 3d do, 5. Best buck 2 years or under, 10; 2d do, 8; 3d do, 5. Best pen five ewes, over 2 years, 10; 2d do, 8; 3d do, 5. Best pen 5 ewes, 2 years or under, 10; 2d do, 8; 3d do, 5. Best pen 5 buck lambs, 8; 2d do, 3 and Morrell's Shepherd. Best pen 5 ewe lambs, 8; 2d do. 3 and Morrell's Shepherd.

Middle Wooled.—Best buck over 2 years, $10; 2d do, 8; 3d do, 5. Best buck 2 years or under. 10; 2d do. 8; 3d do. 5. Best pen 5 ewes, over 2 years, 10; 2d do, 8; 3d do, 5. Best pen 5 ewes, 2 years or under, 10; 2d do, 8; 3d do. 5. Best pen 5 buck lambs, 8; 2d do. 3 and Morrell's Shepherd. Best pen 5 ewe lambs, 8; 2d do, 3 and Morrell's Shepherd.

This class includes South Downs, Norfolk, Dorset, Native, &c.

Merinos.—(The sheep must be shorn during the season, and the sample of fleece exhibited.) Best buck over 2 years, $10; 2d do, 8; 3d do, 5. Best buck 2 years or under, 10; 2d do, 8; 3d do, 5. Best pen 5 ewes. over two years, 10; 2d do, 8; 3d do, 5. Best pen 5 ewes, 2 years or under, 10; 2d do, 8; 3d do, 5. Best pen 5 buck lambs, 8; 2d do, 3 and Morrell's Shepherd. Best pen 5 ewe lambs, 8; 2d do, 3 and Morrell's Shepherd. Best samples of wool, not less than 10 fleeces, Silver Medal.

Saxons.—(The sheep must be shorn during the season, and sample of fleece exhibited.) Best buck over two years, $10; 2d do, 8; 3d do, 5. Best buck 2 years or under, 10; 2d do, 8; 3d do. 5. Best pen 5 ewes, over 2 years, 10; 2d do, 8; 3d do, 5. Best pen 5 ewes, 2 years or under, 10; 2d do, 8; 3d do, 5. Best pen 5 buck lambs, 8; 2d do. 3 and Morrell's Shepherd. Best pen 5 ewe lambs, 8; 2d do, 3 and Morrell's Shepherd. Best samples of wool, not less than 10 fleeces, Silver Medal.

Samples of each fleece prepared for exhibition, must be deposited with the Secretary of the Society. to be preserved in the Agricultural Museum, in Merino, Saxon, and Cross Breed classes of Sheep.

Cross Breed Sheep.—(Sheep to be shorn during the season, and sample of fleece exhibited.) Best buck over 2 years, $10; 2d do, 8; 3d do, 5. Best buck 2 years or under, 10; 2d do, 8; 3d do, 5. Best pen 5 ewes, over 2 years, 10; 2d do, 8; 3d do, 5. Best pen 5 ewes. 2 years or under, 10; 2d do. 8; 3d do. 5. Best pen 5 buck lambs, 8; 2d do. 3 and Morrell's Shepherd. Best pen 5 ewe lambs, 8; 2d do, 3 and Morrell's Shepherd.

Fat Sheep.—*Long Wooled*—Best fat sheep. over 2 years, $5; 2d do, 3; 3d do, Morrell's Shepherd. Best fat sheep. 2 years or under, 5; 2d do. 3; 3d do, Morrell's Shepherd. *Middle Wooled*—Best fat sheep, over two years, 5; 2d do, 3; 3d do, Morrell's Shepherd. Best fat sheep, two years or under, 5; 2d do, 3; 3d do, Morrell's Shepherd.

Statements required as to the manner of feeding. as for fat cattle.

Foreign Sheep.—*Long Wooled*—Best buck, $10; best pen five ewes, 10. *Middle Wooled*—Best buck. 10; best pen five ewes, 10. *Merinos*—Best buck, 10; best pen 5 ewes, 10. *Saxons*—Best buck, 10; best pen five ewes, 10.

SHEPHERD'S DOG.

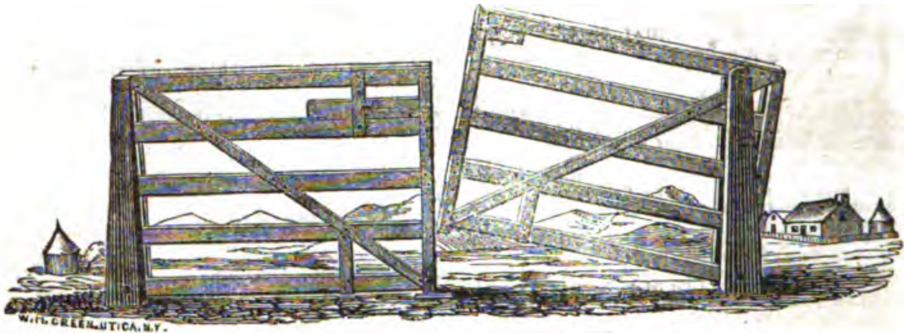
Best shepherd's dog, $5; 2d do, Morrell's Shepherd.

Evidence to be furnished of the thorough training of the dog, otherwise no premium can be awarded.

SWINE.

Best boar, over 2 years old, $10; 2d do, 5. Best boar 1 year old, 10; 2d do. 5. Best boar 6 months and under 1 year. 8; 2d do, 3; Best breeding sow, over 2 years, 10; 2d do, 5. Best breeding sow 1 year old, 10; 2d do. 5. Best sow 6 months and under 1 year, 8; 2d do. 3. Best lot of pigs, not less than 5, under ten months, 10; 2d do, 5.

(*Concluded in our next.*)


W.H. GREEN, UTICA, N.Y.

PARKINSON'S IMPROVED GATE.

EDS. GEN. FARMER:—Having procured an interest in "Parkinson's Improvement in hanging and operating Gates," for the use of my farm, and finding them far superior to any gate I have ever used or seen, and finding them thus pronounced by numerous others, I have thought it might be attended with benefit to my fellow farmers and all others who are freeholders, and consequently gate users, to introduce them through your widely circulated and valuable journal. Their simplicity, cheapness, convenience, and safety, also that they may be used as well in winter as summer and never sag, being among their most prominent features of superiority. They may be made of either slats or pickets, nearly in the same manner in many respects as our common gates, except that no frame-work is required, slats being used instead of morticed scantling. The posts are split down with a saw, (either at the mill or by hand,) and a tongue taken out the thickness of the gate, or enough thicker to admit of the gate's working freely in the space, and hung at the bottom by simply passing through both gate and post a single wooden pin. After the posts are set, (which is not usually done until the gate is attached,) they are sawed asunder in the middle and roll over each way, having previously prepared slats in the middle, in order to make two gates of it. A small short post is placed in the middle, with a notch cut in it to receive and steady the gates when shut; also, a small slide is attached, to pass through both parts and fasten them so firmly that no animal, however sagacious, can open them. Thus we save the expense of hinges, (not a small item in hanging a dozen gates,) save half the expense in making, and some expense in material; besides, any common farmer can make and hang his own gates without the aid of a machine, and have a gate that can never sag, (the pest of all hinge gates;) also, it can be used the year round, never being obstructed by snow, as in case of a very heavy fall the gate may be raised by raising the pin, thus raising the gate to a level with the snow.

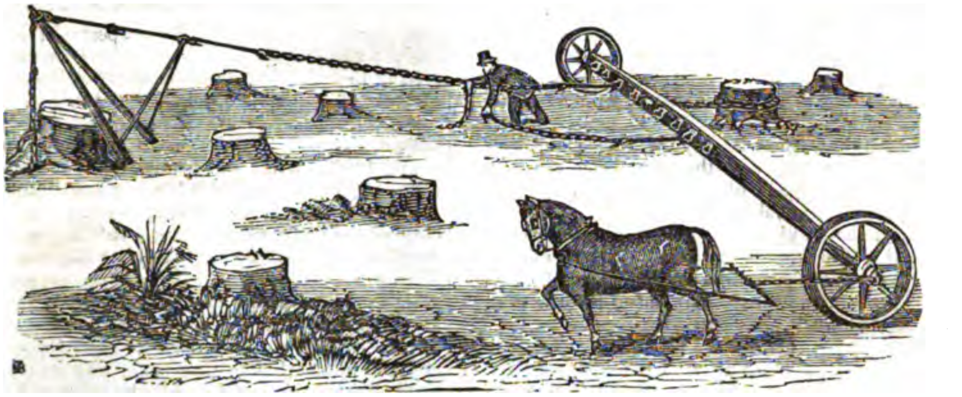
Your readers will readily see that these gates are operated quicker, as a person can stand by their side and throw them both over at once with one finger of each hand, and they will remain open without fastening while the team passes through, which may be held by the bit while opening and the reins while shutting, the operator having to step but one pace after shutting one to reach the other, which may be thrown carelessly together with no fear of their breaking or splitting when made of common ¾ inch pine, spruce, or hemlock lumber. They never can blow open to expose crops; they work as well on uneven ground as anywhere; and if the posts are hoven by the frost sidewise, they are operated nearly as well. The fence, if board, is nailed to the same posts, requiring no extra ones. They may extend higher than the gates, if desired, and be capped by splitting the cap the same as the posts, and the gates made in the most beautiful style, of pickets, or may be made of the coarsest material, with planks or slabs pinned together at the bottom for posts, at an expense (without posts) of from seventy-five cents to two dollars. They are equally convenient for small as large gates, a small spring or snap being attached to the post to hold the gate down.

Persons who have not seen a full sized gate, may come to the conclusion that they are too heavy for common use, which, however, is a mistake, as a child who can by no possibility carry round or open one-half of our common farm gates, can open a sufficiently heavy one for common purposes, the lifting being equal to 8 lbs. 3 oz. at the starting point, on the gate I use, and becoming lighter every inch it is raised. If desired, however, a pulley may be attached by placing the roller near the top of the post, fastening one end of the string to the inside corner of the gate, and the other end to a weight which passes down the back side of the post, in a casing or open, as preferred. G. H. LAMBERTON.—*Waterville, N. Y., Feb'y*, 1851.

We hope our correspondent will continue to be well pleased with the operation of these gates; but we have seen so many *improved gates* that were inferior to the old swing gate, *well made and hung*, that we should prefer having them well tested before recommending.

A GOOD NATIVE COW.

MESSRS. EDITORS:—Through the medium of your paper we find many of the farmers throughout the country boasting of the fine qualities of their stock —their "Short Horned Durhams," their "Devonshires," or some other "blood"—as far superior to any other for workers or milkers. All I have to say through the same medium, is that I have a *Native scrub cow* which I wish to class with their number one "bloods," as a milker. Let those that have any better speak out. From my cow, in just ten months, commencing March 10th, 1850, was made 397¾ lbs. of good well-worked butter, besides one churning of about four pounds from which we were unable to make butter; also furnishing milk for my family, averaging about four persons, for the same length of time. Her keeping was besides good hay or pasture, four quarts of wheat bran per day. WILLIAM PERRY.—*Florence, Ohio, Feb.*, 1851.



STEWART'S PATENT STUMP MACHINE.

STEWART'S PATENT STUMP MACHINE.

Having been requested to give a plan of a stump machine, to be operated by a horse, we present the above, which is very highly recommended in the eastern agricultural papers. Never having seen the machine in operation, we give the following description from the New England Farmer:

"This machine is not only used for pulling stumps, but it is applicable to moving buildings, rocks, &c. It possesses great power and may be worked with ease and convenience.

A strong chain is put around the root of the stump to be removed, as represented in the engraving on the left. This chain passes over *shears*, or strong timbers so placed as to give the power at the stump an upward direciion. In many cases this part may be dispensed with, and the chain pass over the stump. The chain continues onward to the lever, on wheels, to which the horse is attached. This lever is fastened te a ordinary stump. When the horse has passed on, according to his present position, the length of the lever, he is turned in the other direction, and at the same time, the outer chain is dropped and the inner chain is hooked into the leading chain, and the horse passes on to the extent of the lever in the other direction.

A pair of oxen may be used, if more convenient. When stumps are thick, a large number may be pulled without removing the lever from the stationary stump. It is said that the largest stumps may be easily extracted with this machine. A pair of horses or oxen is a sufficient team to take it from place to place, and three men are sufficient to manage it in the harvest work. The removal of 100 stumps is considered a day's work.

Machines and patent rights are offered for sale. Address, William W. Willis, or James Kilburn, Orange, Mass. Reference is made to the following gentlemen:—Alvah Crocker, Esq., Fitchburg, formerly President of Vermont and Mass. Railroad; S. F. Johnson, engineer of Troy and Greenfield Railroad; Gilmore & Carpenter, Boston, railroad contractors; Boody, Dillon, & Co., Springfield, railroad contractors."

Remedy for Looseness or Scours in Calves.—Make a tea, of equal portions of white oak, beech, and slippery-elm bark, and give in moderate doses, twice a day.—*Cole.*

WHEAT RAISING AND WOOL GROWING.

It has been said (how truthfully we will not argue) that the American nation is a nation of gold hunters and gold worshippers—that they pay a ready homage at the shrine of mammon, and are last to leave her devoted altars. That they are highly impulsive, impatient, and restless for gain, and contrast strangely with the sober, patient, and reflective German, is obviously apparent. Acquisitiveness is a striking feature in their national character, and is often cultivated at the expense of the very object in view. The truth of this may be seen particularly among agriculturists in grain growing districts. They are like the selfish child who strives to grasp in his tiny hand a treble portion of nuts or fruit, and loses his hold and finds himself without any. A most suicidal policy is pursued by the majority of farmers in the grain raising sections of our country. Eager for gain, and unwilling to pay out, they go on from year to year cropping and carrying off, without restoring suitable fertilizers, until, ere they are aware, their farms are impoverished and stinted crops and barren soils are the certain results.

According to the census of 1840, the average product of wheat per acre throughout the Empire State, was 14 bushels; oats, 26; barley, 11; rye, 9½; and indian corn, 25. The number of sheep in the State, was 5,000,000, or over one quarter of all in the United States. They yielded 2¾ lbs. of wool per head. Had these sheep been of the Spanish Merino breed, and well kept, they might have yielded 2 lbs more per head, which, at 20 cts. per lb., would have added to the amount $3,500,000, a very pretty item to be divided between the wool growers of the State, but a serious drawback on their gains. The wheat and corn crop might, and ought to have been doubled. The number of bushels of wheat grown in New York in 1847, was 14,500,000 bushels. Had it been doubled, as it could have been on a less number of acres, over $14,000,000 of dollars might have been added to the pockets of the wheat growers; and by doubling the corn crop, which was 16,000,000 bushels, an additional sum of $8,000,000 might have been realized. Of the practicability of this I have not a doubt.

We affirm that it is as easy to obtain 30 bu. of wheat, or 50 bu. of corn from an acre, as one-half that amount; and it is as practicable to clip 500 lbs. of wool from 100 sheep, as 300 lbs., and this from the same cost of keeping. It has been found that on a wheat farm of 100 acres, 100 sheep may be kept and quite as much wheat raised with, as without the sheep. There is no manure equal to sheep manure for the production of wheat. It contains certain properties that enters largely into the composition of the starchy portions of the berry and contributes greatly to the growth of straw. Wheat raising and wool growing should be united, and its results would be seen in better yields of wheat and in the constantly improving condition of the farm. Let no more land be kept under the plow than can be suitably fertilized; and let it be remembered that sheep manure is more valuable than all other barn-yard manures for the production of cereal grains. The character of soils is constantly undergoing a change by cultivation, and impoverishment is the certain result unless it is averted by the skill of the husbandman.

Large tracts of land in Virginia, that were once fertile and productive, and yielded 30, 60, and 100 fold under the hand of the cultivator, have long ago been abandoned as barren and desert wastes. Of late years these tracts of land are being redeemed from the dominion of the wolf and other wild beasts, and being restored and made available by sheep. In time these lands will again be productive. Many of the lands in Western Vermont were, thirty years since, becoming unproductive and barren, but their conversion into sheep pastures has made them now more highly productive. We are of the opinion that if the farmers in the grain growing districts would plow and sow one-half the number of acres they now do, and keep double the number of sheep, their products would be greatly enhanced, and their farms in 10 years would be worth a third more and capable of yielding returns commensurate with the labor bestowed.

One advantage of combining wool growing with wheat raising is, that the farmer has a crop of wool in the spring, which is converted into cash at a season when money is often scarce and obtained at high rates; and further, his wool crop never fails him, while often his wheat crop is blasted. The same land will yield a crop of wool and lambs every year, while it takes two years to obtain a single crop of wheat. These two great leading branches of industrial pursuit should go hand in hand, there being a mutual benefit resulting from each to the other. It is now the prevailing opinion of the best judges, that the wool interest must necessarily form the great leading business for the next five or ten years. There is now an actual scarcity of wool throughout the wool-growing districts of the whole world. Previous to the last clip, it was all worked up, and it is believed that before the next clip many factories will run on short time for want of stock. There is raised in the United States, 75,000,000 lbs. of wool, and annually consumed over 140,000,000 lbs—showing that we raise only about one-half of what we demand for home consumption. About three-fourths of this amount is imported in manufactured goods, and the balance in wool. We make these statements to show that there is little danger of over-doing the business of wool-growing. So long as there are 25,000,000 of people in Great Britain that do not own one foot of God's creation, and are under such oppression that during the late famine there perished over 116,000 in a country having a population of only 30,000,000, and yet according to their best authorities it is capable of sustaining in high comfort a population of 180,000,000. The 39,000 landlords that own nearly the entire landed property of England, Ireland and Scotland, are, by their oppressions, fast driving their half-clad and famished millions to our shores. These must be clothed and fed.

Aside from the foreign emigration, judging from the past, our population in 1875 will number 40,000,000, and in 1900 it will count 80,000,000. It now takes (allowing sheep to yield 3 lbs. per head) 50,000,000 of sheep to supply our present demands, and at the close of the present century, it would require the products of 200,000,000 sheep to clothe the inhabitants. To return to our first position, we say take away no more than you restore to your plow lands, and if you do not care to purchase plaster, salt, guano, or other fertilizers, then put on a flock of *good* sheep, which are sure to enrich both your farms and your pockets. S. B. ROCKWELL.—*Cornwall, Vt., Feb.*, 1851.

WIRE-WORMS.

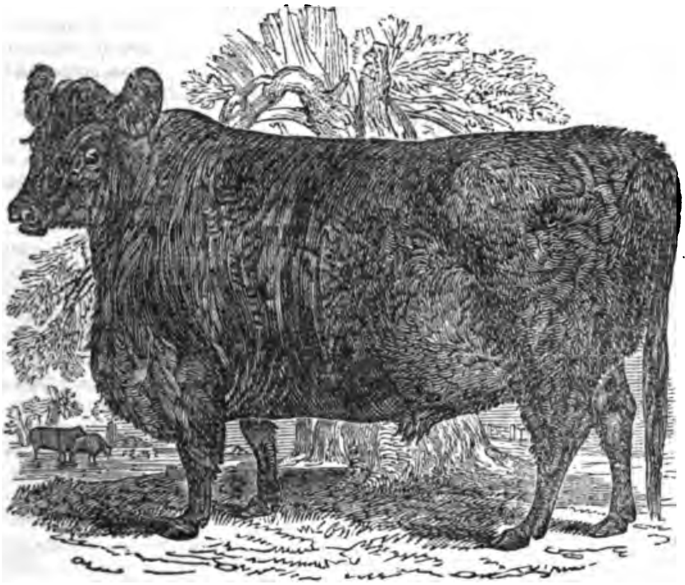
MESSRS. EDITORS:—The writer under the signature of S. R., Mendon, N. Y., states his experience, and asks for some information in regard to the best method of getting rid of the wire-worm. In reply to S. R., I will state a case—my own experience—if you deem it worth inserting in your valuable paper.

Five years ago last fall, I turned six acres of sward which had lain to meadow about eighteen years. Said I to myself, as I rolled the sod over, "I shall beat the nation in the corn business next year" —the land was so rich—so nice. Well, I planted in good season the next spring. When I hoed it the first time, the corn looked fine; but before we had finished the second hoeing, one-half of the piece was destroyed by the red-jackets. I tried some experiments to kill them, but all proved useless. I then plowed up the corn, and found that the ground was full of worms. I raised nothing on the land that year. I plowed it again in the fall; plowed again and planted in the spring, and cultivated the land thoroughly. I had half a crop that season. I followed the same course the next season, and the third year the worms troubled but little. I have fall-plowed every year since, and cropped it to barley, and the worm has disappeared. My barley has yielded 35 bushels to the acre. The result of my experience is this, (in more than one instance:) If you put three hoed crops in succession on your land affected with the wire-worm, and fall-plow it thoroughly, you will use them up. He that is an unbeliever may try it. ELIHU PARRY.—*Van Buren, N. Y.*, 1851.

REMEDY FOR ROUP IN FOWLS.—*Messrs. Editors:* Having noticed a letter from R. H. FOSTER, in the March number of the Farmer, asking you a few questions respecting a certain disease in poultry, with which his neighbors' fowls have been troubled, I take the liberty of writing to you of the experience I have had in the same disease, which I called the roup. Last fall I purchased a pair of fowls of one of my neighbors, which showed symptoms of disease, which were the same as Mr. FOSTER speaks of. It soon went through my flock of twenty fowls, and for some time seemed incurable; but as a last resort, I mixed with about four ounces of fresh butter, one table-spoonful of finely pulverized sage, one of rue, and one of soot, and gave each fowl a pill of this, about the size of a cranberry, once a day for three or four days; and within two weeks they had all recovered. L. ROGERS.—*Willowvale, N. Y.*, 1851.

GALLOWAY CATTLE.

THE Galloway Polled Cattle we once much admired as we saw them exhibited in the Smithfield Show. Indeed, they appeared to have more admirers than any other breed. The favorite color is black; and it is stated that the darkiness of color indicates hardiness of constitution. The following description is by MARTIN, the celebrated English author:



FAT GALLOWAY OX.

"The semi-wild cattle of Chatelherault Park, in Lanarkshire, the descendants of an ancient race, are mostly, if not always polled; and probably the present polled black cattle of Galloway may be derived from the same ancestry.

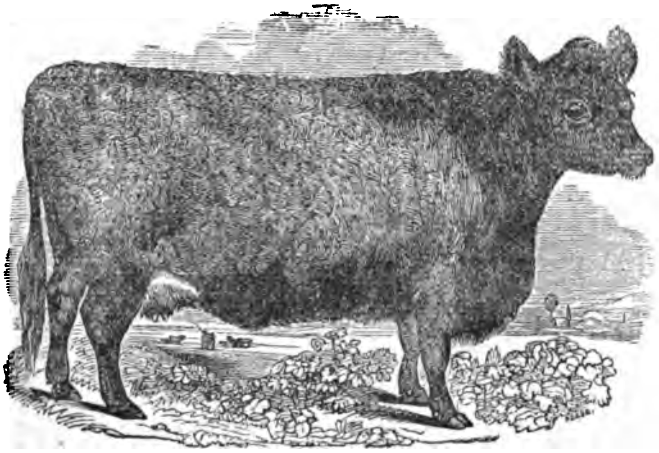
"Formerly, few polled cattle were to be seen in this district of Scotland; but within the last century the breed has greatly prevailed, and it is highly valued. Occasionally, cattle make their appearance with very minute or rudimentary horns, attached, however, to the skin merely, and not sheathing a bony core, indications of a tendency to the acquisition of these natural weapons; and were the point to be followed up by the breeder, these might be soon restored. The breeder, however, is interested in keeping his polled Galloways pure; they are in great request by the grazier, they are of considerable size, fatten readily, accumulating flesh on the best parts; they are less wild than the horned black cattle, and less quarrelsome, and under certain circumstances, as on ship-board, may be packed somewhat closer than the others.

"A well-bred Galloway ox is of admirable form; all is close and compact; the barrel is rounded and ribbed home to the hip-bones; the chest is deep, the shoulders thick and broad; the neck short and thick; the head clean; the back straight and broad; the limbs short, but extremely muscular; the skin moderate, but mellow, and well covered with long soft hair,—that on the ears, which are large, is peculiarly rough and long.

"In the bull, the head is heavy, the neck thick, and boldly erected above; the frontal crest or ridge is elevated and covered with long hair; and the general form is robust, with great depth of chest and roundness of barrel.

"The cow is much lighter, but yet presents those points which attract the regard of the grazier. As a milker she is inferior; for though her milk is rich, it is deficient in quantity, and on the average will not amount to more than six or eight quarts per day, during the summer months, after which it rapidly diminishes.—This inferiority, as it respects milk, is of little importance to the Galloway farmer, his chief pursuit being the rearing of grazing stock; consequently, as a rule, he never kills his calves, but looks to profit from them at a future day. These are generally dropped at the latter part of winter, or very early in spring, and are permitted access to the mother at certain times daily, as long as she continues in milk. For the first five months the dairy-maid and the calf, morning and evening, divide the contents of the udder pretty equally between them; after this period, when the calf begins to graze, its allowance is diminished, till, the cow drying, this supply is of course stopped altogether. During the winter the young animal is housed at night, and fed upon hay, turnips, and potatoes, with a liberal hand.

"Of the calves bred, a few of the most promising females only are reserved as breeders,—the other females are rendered sterile. Heifers in this condition fatten with great rapidity, arrive very early at maturity, and their meat is deemed peculiarly delicate."



GALLOWAY COW.

Inquiries and Answers.

MARL.

Messrs. Editors:—There are in this vicinity several beds of marl. Some of the beds are found in the banks of the Elk Creek, and others deposited in boggy wet land. I have one of the latter upon my land. There are no persons in this region who understand its value or use, so far as I can ascertain. You would confer a favor upon several of your subscribers in this place, by informing us through your paper, what is the comparative value of marl as a manure. Upon what kind of lands is it most useful? At what season of the year, and in what manner and quantity should it be used. **A Subscriber.**—*Girard, Pa., Feb'y*, 1851.

Your marl is doubtless nearly pure carbonate of lime. Such deposits are not uncommon in Cattaraugus and other counties in Western New York and Western Pennsylvania. These are formed by the precipitation of lime from lime-water, just as a crust forms on the bottom and sides and in the spout of a tea-kettle. When the carbonic acid in the water escapes into the atmosphere, which acid holds the calcareous salt in solution, down falls the carbonate of lime, as an impalpable white powder. Sometimes the particles are cemented together. Spread this freely over a few rods in different fields, and watch the result. Sometimes it does much good, and in other cases none at all. If the soil contains lime enough, adding more can have no effect; or, if the soil lack other indispensable elements of crops, then lime *alone* can not give an increase of grass or grain. Marl should be dug and lie for months in small heaps exposed to the air. In this way, if it contains sulphur, salts of iron, or alumina, as if often does, gypsum is formed, which is worth far more than pure lime on most farms.

PLASTER.

Messrs. Editors:—I wish to make some inquiry of you or some of your numerous correspondents, in reference to the application of plaster to wheat and grass; at what time it should be applied; about how much to the acre; what kind of soil it does the best on; whether it would pay cost to have it shipped from Cleveland about fifty-five miles up the Cleveland and Columbus Railroad; and how much of it ought to be a bushel or barrel at Cleveland. There is very little used in this part of Ohio, and we young farmers here are ignorant of its use and its worth. **M. A. Hall.**—*Rippleyville, Ohio, Feb'y*, 1851.

A bushel of plaster will weigh not far from 100 pounds, which is about the usual quantity sown upon an acre. April is a good season to sow it broad-cast over wheat, clover, pastures, and meadows. Where the article is high, by reason of the cost of transportation, many use only from 50 to 60 lbs. per acre. In applying it to corn and potatoes, one bushel of plaster should be mixed with two of unleached ashes, and a small handful put upon each hill, taking care to spread the fertilizer a little over the ground. Make the application just after the first weeding or hoeing. Peas and beans contain a good deal of sulphur, which plaster supplies where needed.

PEAT.

Messrs. Editors:—Can you inform me, through the Genesee Farmer, respecting the mode of converting peat into fuel; or where an establishment of this kind may be found, where I can learn its comparative value, cost of manufacture, &c.? In looking over the back volumes of the Farmer, I find it intimated that the business is briskly carried on in various parts of the northern States; but I find nothing definite. **A Connecticut Subscriber.**—*Feb'y*, 1851.

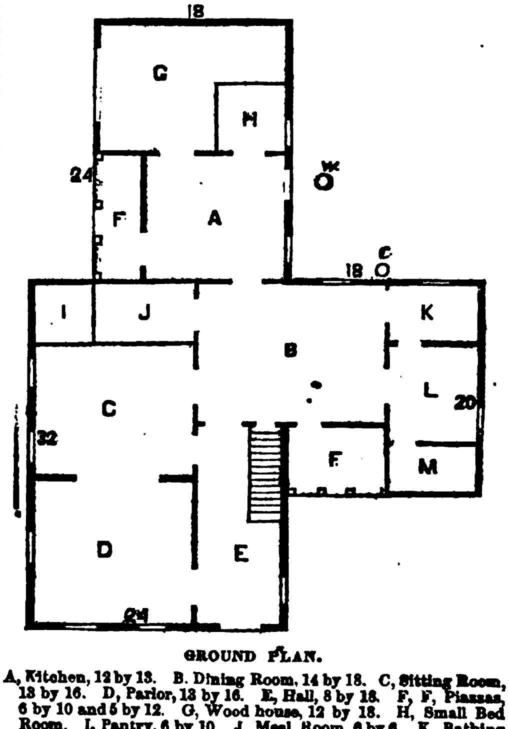
We question whether peat is used as fuel to any extent in the United States. There is an establishment near Portland, Maine, for charring peat to use the coal in the manufacture of nightsoil, which we believe is after the plan invented by Mr. Rogers, of Ireland. It is said to operate well both in Ireland and Maine. Peat may be dried and burnt to coal or coke in cast iron furnaces, or large stone or brick kilns. Coal is itself a fertilizer, and a most powerful deodorizer. We will learn more about its preparation (which we have seen described in English agricultural journals,) and publish the information.

Eds. Gen. Farmer:—I wish to improve my stock of cattle, and wish to know which is the best kind—the Short-horned Durham, or Devon? Let me have your opinion in the next number. **S. Johns.**—*Point Comfort, Feb'y*, 1851.

Our opinion is, that both races are good for particular purposes; as certainly both are propagated with about equal satisfaction in results in this country and in England.—Where feed is not abundant, the Devons being smaller, can subsist and do well in pastures that would not keep Short-horns in equal condition. For making beef, milk, butter, and cheese, it is generally supposed the Durhams are a little superior; but that this notion is well founded, we know of no satisfactory tests having been put on record.

Messrs. Editors:—We should like to hear your opinion, or those of the readers of the Farmer, of the cause, and cure, if any, of three different diseases that the horse is subject to in this section of country, viz: what we here term Big-head, Big-shoulder, and stiff complaint; all prove fatal in the course of time, or leave the animal in such a state that it is of not much account. **T. C. Y.**—*Beverly, Ill., Jan'y*, 1851.

Country Residences.



GROUND PLAN.

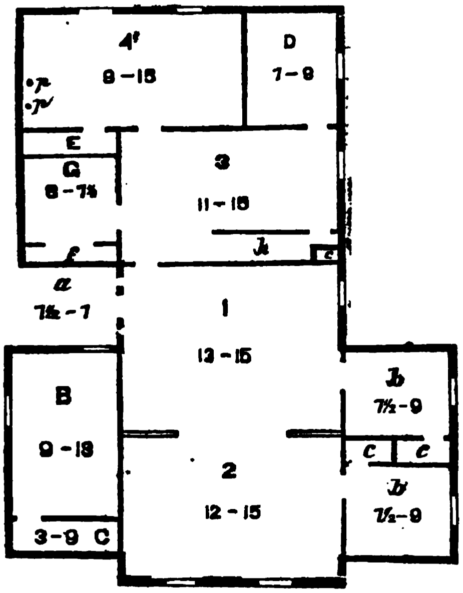
A, Kitchen, 12 by 13. B. Dining Room, 14 by 18. C, Sitting Room, 13 by 16. D, Parlor, 13 by 16. E, Hall, 8 by 18. F, F, Piazzas, 6 by 10 and 5 by 12. G, Wood house, 12 by 18. H, Small Bed Room. I, Pantry, 6 by 10. J, Meal Room, 6 by 6. K, Bathing Room, 6 by 8. L, Bed Room, 8 by 10. M, Clothes Press, 4 by 8.

Eds. Gen. Farmer:—Knowing that you frequently give plans and drawings of buildings in the Genesee Farmer, I send you the above plan, which I have decided to build after; and which, though somewhat similar to a plan published before, is essentially different from anything that I have seen, and suits me much better than any at the same cost. The front end will face a street to the north, and the side a street on the east. The main part will be 24 by 32 feet, and two stories high; the wings only one story. The pantry is as convenient to the dining room as the kitchen. The outside cellar door will be under the meal room, in front of the piazza. Folding-doors between the sitting room and parlor. J. H. ANDREWS.—*Almont, Mich.*, 1851.

OUR LITTLE COTTAGE.

MESSRS. EDITORS:—I have been particularly delighted from time to time, with the plans of building farm-houses and cottages, given in the Farmer, and as you say you shall continue to give plans through the year, I will venture to send you the plan of our little cottage built the past year, if you think it worth a place in your paper.

What is more beautiful than a neatly finished cottage, surrounded by trees and shrubbery both useful and ornamental, the well-trained honeysuckle and jasmine, the roses of different varieties, and flowers of various hues, that perfume the atmosphere with their sweet fragrance, tastefully arranged around it; this will make home pleasant, and surely it may be called one of the bright spots of earth. When we rise in the morning and look out upon the flower-yard, and see the crystal dew-drop hanging upon the newly blown rose or the more modest lilly, and the meek violet peeping out from its fellows, we say truly this is rural beauty—a luxury that every one might wish for; and those who desire the beautiful, can with a little labor enjoy it.



DESCRIPTION OF GROUND PLAN.—1, sitting room, 13 by 15. 2, parlor, 12 by 15. 3, dining room or kitchen, 11 by 15. 4, wood-house or back kitchen, 9 by 15½, with pump from well and cistern in the end, *p*, *p*. G, pantry, 7½ by 8. *f*, closet in pantry, with lattice and screen bottom to let in air from cellar. *a*, vestibule, 7 by 7½. B, bed room, 9 by 13; clothes press, 3 by 9. *b*, *b*, bed rooms, 7½ by 9. *c*, *c*, *c*, closets. D, bed room, 7 by 9. E, scullery. *h*, stairway. The upright part of the roof is 15 by 28, 14 feet high. The two wings are each 9 by 16, 9 feet h The other two rooms, with pantry, &c, is 20 by 9 feet high, with stove chimney from upper floo the middle of this and the upright, to accommo any room desired.

This is a plank house, finished in modern st with pilastre corners, and costs about $500, not cluding the hauling of materials or boards.

I think a house after this plan, finished in the go style, would look well; but probably it would more expensive. A FARMER'S WIFE.—*Clare N. Y.*, 1851.

FARM COTTAGE.

THE following design for a Farm Cottage, with scription, &c., we take from the New York Agri turist:

"In the construction of a farm cottage the ch objects to be considered, are, 1st, the number character of the people it is intended to accom date; 2d, the expense, or present means and pr pective ability of the proprietor; 3d, the position regard to exposure to the sun, and in affording c venience to the out buildings, or other parts of farm; 4th, consistency, or congruity, so far as i considered as an object in landscape scenery, or lates to the nature of the materials of which it constructed, the color and finish of the exterior, its fitness or adaptation in promoting health, co fort, and cheerfulness to the occupants within.

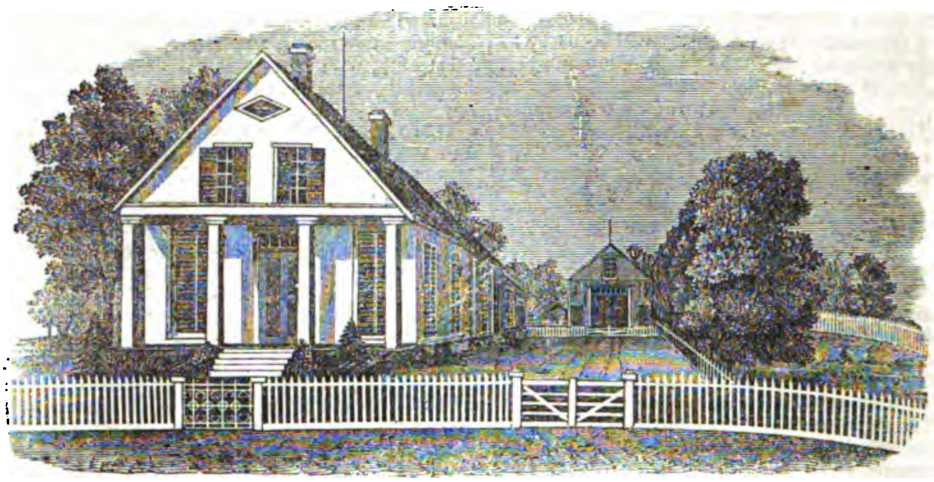
"Those who possess but moderate means, and unable to erect a more costly mansion, may build many situations, a very comfortable and conveni dwelling, for from $600 to $900, agreeably to plans and elevation denoted by the adjoining cuts

"DESCRIPTION.—The main body of the cottage in the form of a parallelogram, 34 feet long, inc ding the portico, and 32 feet wide, having 14 posts, 2 feet of which extend above the attic fl sustaining a roof of a 16 foot pitch, with the ga end facing the south or south-west. The back of the house, which extends to the kitchen, is 18 23 feet, including the verandah, with 10 foot po supporting a roof of 11½ foot pitch, with the ga towards the north or north-east. The kitchen is by 23 feet, including the passage to the vault, 6 foot posts and a lean-to roof having a 4 foot pit

"The whole building is designed to be elevate a terrace, or mason work, 3 feet above the com level of the ground, to be built of wood, with outer walls lined with bricks. The roofs, also, designed to be built of wood, covered either common shingles, or water-proof cement.

"On the centre of the main body of the hous false chimney top is shown, which may be forme metal, bricks, or artificial stone, for receiving stove pipes from the rooms below. Those who fer fireplaces to furnaces, or stoves can erect a ch ney at each side of the cottage, extending their about 16 feet above the eaves. Between the di room and the kitchen, there is a chimney designe communicate with the cooking range and stov those parts of the house.

"This cottage is designed to be entered from front gate through a portico, 6 feet wide, exten across the whole width of the house. The ent the kitchen and dining room is also designed t passed into on the easterly side of the back pa the building, through a verandah 3 feet wide.



PERSPECTIVE VIEW OF A FARM COTTAGE.

"The windows are all designed to be of good dimensions, and protected by wooden blinds. Towards the top of each gable end, there is a latticed window for ventilation, which may be closed at pleasure in stormy weather.

"Under the entire floor of the main body of the house, a cellar is intended, with walls and arches laid in cement, to be entered by stairs from the dining room, and by a six foot door way on the easterly side, from without. Beneath the kitchen, there is also another cellar, designed for storing wood or coal, entered from the kitchen through a trap-door, and likewise by a passage, on the easterly side, from outdoors. If circumstances require it, a dairy, or milk cellar may also be constructed under the dining room, and lighted, or ventilated, by windows at each side of the house.

"The whole building is designed to be protected from lightning by a half-inch copper rod, 48 feet in length, erected at the gable end near the back parlor window, and secured in its place by means of wooden props, extending from the roof.

"In the ground plan, H denotes the front lobby, or hall, 7 feet wide, including the front stairs.

P, a double parlor, 14 by 28 feet, with folding doors communicating with the front lobby, or hall. Either, or both these parlors might be used as sleeping apartments, should circumstances require.

L, a room communicating with the front lobby, or hall, 11 by 12 feet, with a closet 4 feet square, and may be used for a library, office, living room, or nursery, according to the taste or wants of the occupant.

B, a bed room, designed for the head of the family, 11 by 12 feet, with a closet 4 feet square, and communicating with the library and dining room.

D, the dining room, 14 by 20 feet, communicating with the front lobby, H; the back entry, E, and the cellar at S.

K, the kitchen, 12 by 20 feet, communicating with the dining room by the back entry E, and a sliding window in the pantry C; with the wood cellar at *d*; and the back yard, by the steps S.

E, the back entry, 4 by 4 feet, communicating with the verandah, kitchen, dining room, and the back-garret stairs.

V, the vault, 5 by 6 feet, communicating with the verandah by a passage under cover, 3 feet wide.

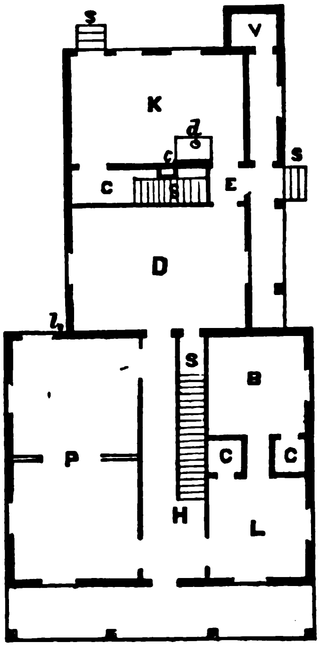
C, C, C, closet, or pantries.

S, S, S, S, stair ways, or steps.

c, kitchen and dining-room chimney.

d, trap-door, covering the wood-cellar stairs.

l, the lightning conductor.



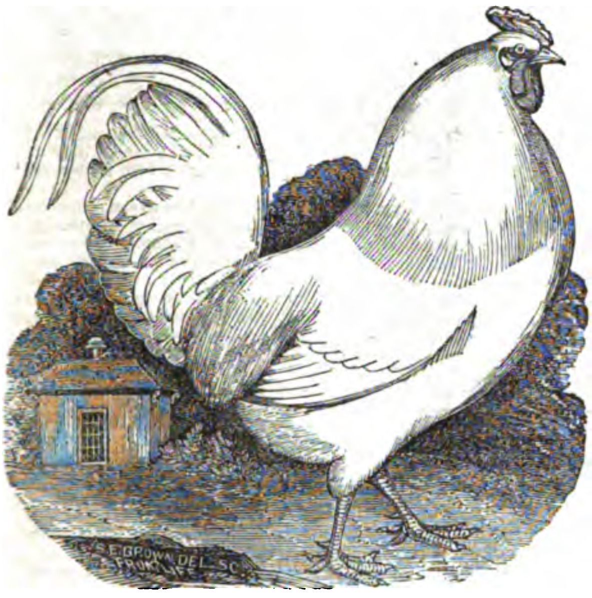
PLAN OF THE GROUND FLOOR.

"The reader will bear in mind, that the dimensions of a house, built on the foregoing plan, may vary in size, or may be constructed of bricks or stone, as may best suit the taste, ability and wants of the occupant; but the position, in regard to the sun, and the general arrangement, may be the same."

THE DORKING FOWL.

We have received several letters similar to the following, of late, asking for a description and engravings of the Dorking fowl:

"Messrs. Editors: — You will oblige me, and many of your subscribers in this place, by giving a description of the Dorking fowl. Some of us who are not engaged in farming, prize your paper very much for the information it contains about fowls." H. C. J.—*Cazenovia, N. Y.*, 1851."



WHITE DORKING COCK.

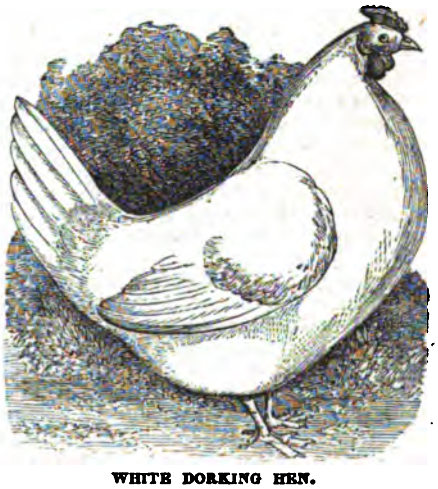
We are constantly receiving requests from new subscribers for information on subjects of which we have fully treated in previous volumes of the Farmer. We have before published a description of these fowls; but for the benefit of new subscribers, we take pleasure in again bringing the Dorkings to the notice of our readers. Mr. Eben Wight, of Dedham, Mass., has very kindly and opportunely sent us portraits of two of his white Dorkings, which grace this page. We have no need to speak of their beauty, as they speak for themselves.

We regret that the price of the finer sort of fowls is so extravagantly high; but these prices can not long be maintained, and the time is not far distant, we think, when every farmer, and every farmer's wife and children, can have a poultry-yard well stocked with the *Dorkings*, *Shanghaes*, and *Cochin Chinas*. It is foolish to go crazy on the chicken question, and applaud everything new, or with a new name; and it is equally foolish to suppose there can be no improvement in fowls—no superiority in one breed over another — and that the fowls which we see running around our streets and yards, are "good enough."

It is generally supposed that the Dorking fowls originated in Dorking, Surry, England, from which place they take their name. The Dorkings were originally white, but latterly, even in Dorking, have become of all shades of color, by crossing, so that the pure white Dorking is scarce. Since so much attention has been attracted to the subject, pains have been taken to increase the pure breed, and for this purpose they have been imported. The cock and hen of which we give the portraits, are from fowls imported by Mr. Wight. We have seen fowls of every shade of color, and of every form, bought and sold for Dorkings, and it is well to learn the true characteristics of the breed. Martin, an English author, who visited Dorking in Surry, and examined the fowls there, says:

"The Dorking fowl is a short-legged, plump, round-bodied fowl, remarkable for having five toes, — that is, a supernumerary hind toe. We have indeed seen some with one or two more supplemental toes, in a rudimentary condition, and which appeared anything but ornamental. The pure Dorking fowl is of good size, and of a white color; but such are now seldom seen. During a recent visit of some weeks to Dorking, though we visited the market regularly, and explored the country round, on one or two occasions only did we meet with pure white birds. In all, however, more or less white prevailed; but the cloudings and markings of the plumage were unlimited. Many were, as we observed, marked with bands or bars of ashy gray, running into each other at their paler margins. Some had the hackles of the neck white with a tinge of yellow, and the body of a darker or brownish red color, intermixed irregularly with white; yet in all were the five claws present. Neither in form nor coloring is the Dorking breed attractive; it is too rounded on the body, and too low on the limbs to be graceful; but its flesh is in high repute, and vast numbers of these fowls are sent to the London market.

"This breed has recently been introduced into other parts of England, and also into Ireland, and in the latter instance without any deterioration. It is chiefly for its flesh that the Dorking fowl is valued, yet the hen is an excellent layer and sitter, as in fact all short-legged fowls are; in incubation, indeed, the advantage of short legs is evident; the eggs are in less danger, and less liable to disturbance."



WHITE DORKING HEN.

Some English breeders think the Dorking fowl degenerates if removed from its native climate.

Horticultural Department.

EDITED BY P. BARRY.

At the present time there is an unusual interest felt among all classes of people, in every part of the country, in relation to the culture of fruit and gardening in general. But the want of information — we mean real practical information—is a serious stumbling block. Books and periodicals are to be had, and good ones too, that offer nearly all the assistance that written instructions are capable of yielding; but this falls far short of supplying the want. Half an hour a day in a good garden, where gardening operations are carried on by practical and well trained men, would be better than a month's reading of the best books that can be written. But very few of our people have access to such gardens. Here and there we have good gardens; but they are private, and conducted for private purposes. What is wanted are *public* gardens — horticultural schools — where all branches of gardening will be publicly taught to all who desire to learn it, and where experiments and systems will be carried out for the public benefit.

There are a multitude of gardeners employed in various parts of the country. Some are well trained and really skilful men; but the greater part are mere laborers from the old world, who know next to nothing of our climate, productions, wants, tastes, and habits. The consequence is a woful mismanagement, that discourages people, retards the advancement of good culture, and creates a multitude of misapprehensions. Shall not some steps be taken to remedy this great evil? We have one to propose, but it may appear visionary. We are well satisfied, however, that it is not so; but a plain, feasible plan, carried out successfully in countries that can not boast our resources. We are not about to propose an appeal to either our national government or State legislature — we are not sure that it would be proper to do so; and even if it were proper, it would undoubtedly be vain. What we would propose is, that every large city and town, such as, for instance, in our State, New York, Albany, Utica, Syracuse, Rochester, and Buffalo, where horticultural societies exist, establish a *Horticultural School,* to be managed by the executive officers of the Society in conjunction with the Mayor and Common Council of the city — that all branches of gardening shall be taught in it theoretically and practically, by competent instructors—that a definite period or course of study be adopted, at the end of which pupils, after passing a satisfactory examination, might receive a diploma — that terms or conditions of admission might be so arranged as to meet the circumstances of all classes. The fees and productive labor of the pupils might almost, if not quite sustain the school. The sons of wealthy men, who would be sent there to learn the art and science of gardening for their improvement and recreation, only might be required to pay a certain fee, while the sons of poor men, who would go to learn it as a trade or profession, might be admitted free and be supported during the term of their study.

Our attention has been particularly called to this subject now, by hearing that the Garden of Plants at Rouen, in France, has been, or is about to be, converted into such a school as we have described. The plan is set forth in the following programme:

"ARTICLE 1. A School of Horticulture will be established at the *Jardin des Plantes* of Rouen. The course of instruction will be three years, and will comprise both theory and practice.

"ART. 2. There will be taught—1st. A course of elementary botany, with concise explanations of geology, chemistry, and physics, applied to horticulture. 2d, A course of arboriculture, including the laying out and management of parks gardens, &c. 3d, A course of natural and forced culture of culinary vegetables, both for market and private use, and in different soils and situations. 4th, A course of floriculture, comprehending hardy and hot-house plants of ornament, both for sale and private gardens.

"ART. 3. The Professor of the fourth course will be charged with the superintendence or government of the gardens of the work, the pupils, and care of all the materials.

"ART. 4. Each Professor will have the direction of his own course, and the exclusive control of its labors. The rules will be made by the concurrence of all the Professors, and be submitted to the approbation of the Mayor, in order that the Institution may correspond in all its parts.

"ART. 5. There will be admitted, gratuitously, to this school, children from 14 to 18 years of age, whose parents reside in the city of Rouen, and who are unable to pay any fee. These children must have attended the primary schools, and possess the knowledge to be acquired in them. There will also be admitted, under the same conditions of instruction, in consideration of a fee to be fixed by the municipal council, children whose parents are able to pay, without regard to their place of residence. The number of pupils to be fixed in such a manner that all can be usefully employed in the manual labor of the school.

"ART. 6. Provides for the employment of assistant teachers, practical workmen, who will conduct the different branches of labor.

"AST. 7 Provides for the payment of salary to such pupils as may deserve it, before the expiration of the three years' course.

"ART. 8. Relates to the public examination of the pupils and the award of diplomas at the end of their study.

"ART. 9. A general report of the situation of the school, and the progress of instruction, to be submitted annually to the Mayor and municipal council, by the Professors.

"ART. 10. All the labor of gardening, plantations, and care of trees in the public grounds in the city of Rouen, will be executed by the pupils of the school of horticulture.

"ART. 11. All the course will be public, the instructions to be applicable to the management of public and private gardens of all sorts."

Now, we ask the friends and promoters of improvement, those who desire to place within the reach of the rising generation a knowledge of the most important and interesting arts and sciences, what they think of this programme, and whether it be not possible and perfectly practicable to establish in such cities as Rochester, Buffalo, Cleveland, Cincinnati, &c., a school of horticulture on a similar plan? Let us at least discuss the matter, and test the feeling in relation to it. Is it not time for Americans to move in the matter of training their own gardeners, and of giving their youth an opportunity of learning how to manage their gardens? The noble Society of Massachusetts will soon, we hope, give attention to the subject; and why cannot our great State Agricultural Society? We trust the time will come when horticulture will form a part of common school education, and when, if "*normal*" schools exist, they will have gardens attached, where those who are to be trained there for the teachers profession, will be qualified in this, as well as in other departments.

NOTES BY THE WAY.

Recently in returning from New York by the Erie railroad, we made a hasty visit to the elegant residence of **Roswell L. Colt**, Esq., of Patterson, N. J., who is well known as one of the most spirited gentlemen in the country in agricultural and horticultural improvement. His residence is situated on the summit of a pretty little hill commanding a fine view of the town and the surrounding country. Immediately around the mansion the grounds are tastefully laid out and well furnished with rare and fine trees. Among others we noted a *Pawlonia* of flowering size, many beautiful specimens of English and Irish *Yews*, *Deodars*, *Cedar of Lebanon*, *Abies morinda*, *Pinsapo*, *Webbiana*, and others quite rare and scarce; some fine Scotch and Austrian *Pines*, and a fine *Magnolia conspicua* covered with buds.

Around the base of the hill are his green-houses and graperies. The latter are numerous and extensive, both warm and cold. Mr. C. informed us that last year he sold about $500 worth of grapes, besides what were consumed by his family and friends. He is about erecting a new one. His fruit and kitchen gardens are very complete and well managaed. The improvements were commenced in 1840, but by a liberal and thorough system of management, the greater portion has the appearance of being a quarter century old at least.

We were not a little gratified with the inspection of Mr. **Colt's** live stock, among which were some beautiful specimens of Hungarian and Alderney cattle. Of poultry the collection is very extensive. The most remarkable were Golden and Silver Pheasants, the most charming birds we have ever seen. They cost $25 per pair. We also noticed White Shanghaes, a Black Swan and a pair of White ones; besides all the other popular breeds of domestic fowls. Mr. **Colt** has promised to bring some of his best stock to the State Fair at Rochester.

Geneva.—In waiting for a train westward, we made a call upon some of our gardening friends there. Capt. **Dakin**, the well known, gentlemanly, commander of the "Ben Loder," has one of the most complete establishments of the size in the State,—everything in such complete order that an amendment could scarcely be suggested. A small plot in front is devoted to ornamental articles and is separated from the main garden by a very pretty privet hedge. It is laid out with walks covered with a soft blue slate that makes a path as elastic as a fine lawn, and edged with perfect lines of box. The beds are covered with grass and planted with choice shrubs, roses, &c. In the garden are fine beds of raspberries, strawberries, &c. The walks are lined with dwarf apples, and the interior filled up with dwarf and low standard trees of all kinds among which his vegetables are grown. He has a very complete poultry house and a nice collection of Dorkings, Shanghaes, &c.

Indeed, the whole establishment is one that any man might feel proud of. We could not but remark to a friend who accompanied us, "what a pity that every citizen whose means would justify it, does not make such a home as this. What comfort there would be and what a charming town it would make."

H. L. **Sutdam**, Esq., is the next neighbor to Capt. **Dakin**, and is worthy of being so. His garden presents the same form and a similar arrangement. His improvements are not complete, but he is pushing them forward vigorously. We found him draining his garden and fitting up a very complete little cold vinery about 30 feet long and 12 feet wide. We might point to these two gardens as models for business men who reside on small city and village lots. We would have been pleased to visit the fine residence of **Thos. D. Burrall**, Esq., and some others who have fine gardens, but our time was limited.

HORTICULTURAL SOCIETIES.

BUFFALO HORTICULTURAL SOCIETY.

We are indebted to **Benj. Hodge**, Esq., for the proceedings of the annual meeting. The following officers and committees were elected for 1851:

President—**Benjamin Hodge.**

Vice Presidents—Abner Bryant, H. B. Potter, Joseph G. Martin, and James W. Brown.

Corresponding Secretary—W. R. Coppock.

Recording Secretary—John B. Eaton.

Treasurer—A. A. Howard.

COMMITTEES.

On Flowers and Flowering Plants—W. R. Coppock, J. W. Brown, J. F. Bryant, C. F. S. Thomas, and E. Ford.

On Fruits—L. F. Allen, Lewis Eaton, H. W. Rodgers, J. G. Martin, and J. Dart, jr.

On Vegetables—J. Sexton, O. Allen, R. Hadfield, S. J. Millsand, T. Burwell.

On Printing—The President, Treasurer, and Recording Secretary.

On the Library—J. B. Eaton, A. A. Howard. and J. Sexton.

It was resolved that four exhibitions be held during the ensuing season, in May, June, August, and September; and also monthly meetings.

On motion of **Lewis F. Allen**, it was resolved to subscribe for the Horticulturist, Western Horticultural Review, Hovey's Magazine, The Genesee Farmer, American Agriculturist, Albany Cultivator, and Hovey's Fruits of America.

The following gentlemen were elected honorary and corresponding members:—Hon. M. P. Wilder and C. M. Hovey, Esq., Boston; Dr. W. D. Brinckle, Philadelphia; Dr. J. A. Kennicott, Northfield, Ill.; S. Young, Esq., Louisville, Ky.; A. H. Ernst, Cincinnati, O.; David Thomas, Cayuga Co., N. Y.; B. P. Johnson, Esq., Sec'y N. Y. State Ag. Society; J. C. Holmes, Esq., Detroit; James Dugal, Esq.; Amherstburgh, C. W.

ALBANY & RENSSELAER HORTICULTURAL SOCIETY.

We are indebted to B. P. **Johnson**, Esq., for a pamphlet containing the list of officers, Constitution, rules and regulations, and premiums for 1851.

President—V. P. Douw, Wolvenhook, Greenbush.

Vice Presidents—E. P. Prentice, Mount Hope; Herman Wendell, M. D., Albany; D. Thomas Vail, Troy; William Newcomb, Pittstown.

Secretary—B. P. Johnson, Albany.

Treasurer—Luther Tucker, Albany.

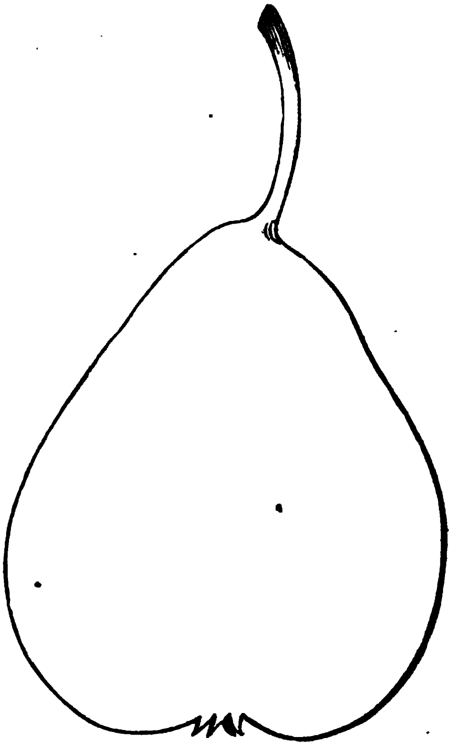
Managers—B. B. Kirtland, Greenbush; J. McD. McIntyre, Albany; J. M. Lovett, Albany; L. Menand, Watervliet; S. Morgan, Watervliet; W. A. McCulloch, Greenbush; James Wilson, Albany; J. S. Goold, Albany; E. Dorr, Albany.

The Society will hold four exhibitions during the year 1851, in the Geological rooms, Albany. The first on the 18th and 19th of June, the second on the 9th and 10th of July, the third on the 10th and 11th of September, and the fourth on the first Wednesday of February, 1852.

HORT. SOCIETY OF THE VALLEY OF THE GENESEE.

The following officers for 1851 were elected at the annual meeting held on the 3d of February, 1851:

President—**Levi A. Ward**, Rochester.
Vice Presidents—Mathew G. Warner, Rochester; Henry P. Norton, Brockport; J. J. Thomas, Macedon; Asa Rowe, Sweden; S. Donollan, Greece.
Corresponding Secretary—Delon M. Dewey.
Recording Secretary—J. A. Eastman.
Treasurer—James H. Watts.



BEURRE DE WATERLOO PEAR.

Among some 50 varieties of new and rare pears which fruited here the past season, (1850,) the *Beurre de Waterloo* was considered as one of the best, if not *the* best; and therefore we consider it worthy of notice as promising to be of great excellence.

Size medium. Form obovate, slightly pyriform, tapering almost to a point at the stem, which is about an inch long, moderately stout, and inserted rather obliquely, without any depression. Calyx open, segments long, basin shallow. Skin greenish yellow, sprinkled with rough brown dots, and occasionally with a blush on the side exposed to the sun. Flesh fine grained, buttery, melting, juicy, very sweet, with an agreeable perfume. Ripe with us from the 20th to 25th of October.

Tree erect, moderately stout, with light olive colored shoots, thickly sprinkled with brown dots.—Grows well both on pear and quince, and bears early. We do not recommend this yet for small collections, but as being worthy the attention of those forming large collections, and who may desire to obtain new and promising sorts.

THE WESTERN HORTICULTURAL REVIEW. Jno. A. Warder, M. D., Editor. Cincinnati, O.

The first number of this journal appeared in October last. A notice of it was then prepared, but accidentally omitted, and to this time has been overlooked. We are glad to be able to say that, so far, it has been conducted with great ability, and given very general satisfaction. Each number contains 48 pages of large quarto size, printed on good paper, with fair type, and tastefully illustrated. A journal of this kind was greatly needed in the west, where orcharding, gardening, and the vineyard, are becoming such great interests; and Cincinnati, surrounded as she is with gardens and vineyards, possessing an excellent Horticultural Society, enterprising amateurs and skilful gardeners and nurserymen, is the very place for such a journal as the Review, to become useful and popular. We commend it to our readers, and wish it success.

Californian Seeds.—We are indebted to Messrs. J. M. **Thorburn** & Co., 15 John street New York, the well known seedsmen, whose advertisements will be found in this paper, for a catalogue of between forty and fifty species of Californian seeds, comprising annuals, perennial shrubs, bulbs, and trees, which they offer for sale in packages at $2.50 each. Most of them appear to be quite new, and will probably prove to be valuable acquisitions. They are at least worthy the attention of botanists, nurserymen, and those who are curious in the matter of rare plants and trees.

The Curculio.—Mr. **Harvey Green**, of Jefferson Valley, Westchester Co., N. Y., informs us that he has repelled this insect in the following manner: "I tie up straw in bundles about as large as a man's arm, run a long handle into them, set them on fire, and pass them quickly round the trees; the insects fly into the blaze and perish."

He gives this experiment for what it is worth. If at all avilable, it should be commenced as soon as the insect appears.

ANSWERS TO CORRESPONDENTS.

(N. S., Claridon, Ohio.) There are no two varieties of good, long keeping apples, on which you may depend for such large crops, as the English and Roxbury Russets. The Rhode Island Greening is as profitable as any, but does not keep so long as the Russets mentioned. For feeding stock, or for sweet cider, the Jersey Sweeting is probably one of the best. Lyman's Pumpkin Sweet and Pumpkin Russet are large and very productive sorts, valuable for stock.

Peaches.—Crawford's Early Melocoton and the old Red Cheek Melocoton are two of the hardiest, most productive, and profitable varieties we can recommend for general purposes, and will probably give you the greatest number of bushels to the acre of any you can plant.

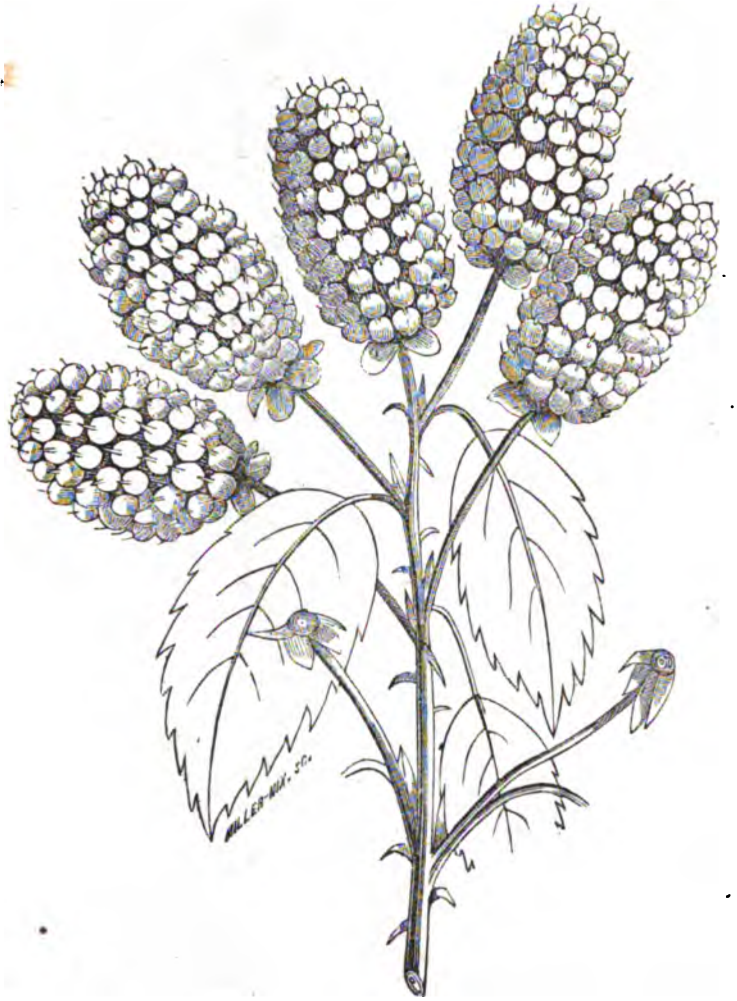
(**George A. Jenkins.**) The rose cannot be successfully grafted on the locust. In relation to grafting, the natural law, that art cannot change, is that the scion and the stock must be of the *same or a closely allied species.*

(**J. Franto**, Kempfield, Pa.) Many of the kinds of fruit you want can be procured here at the nuseries. You had better order the catalogues. See advertisements.

(**A New Subsciber.**) Bury your thorn apples in a heap till next fall; then sow them in light soil in drills, covering one to two inches deep.

(**R. R. Collins.**) Corn and all other grain crops are injurious to young orchards. Crop with roots and give your trees a dressing of ashes or lime, half a peck to a tree, and see that your soil is well drained. Much moisture in a soil retards the bearing of fruit trees.

(**A Farmer.**) To give even the outlines of a profitable system of market gardening would require more time and space than we can at present afford. We should also want to know something of your soil, markets, &c.



THE HIGH-BUSH BLACKBERRY

This is a spontaneous production of the New England States, and bids fair to become a valuable garden fruit. Already great improvement has been made upon it by high culture. The accompanying figure and account of it from Hovey's Magazine, will be interesting :

"The blackberry is likely to become one of the most esteemed of the smaller fruits. Since the introduction of the improved variety, about six or seven years ago—of which we have heretofore given several accounts, and whose cultivation has been so well detailed in our last volume, by Capt. Lovett, of Beverly, who has been one of the most successful growers of the fruit—it has been very generally disseminated ; and, the past year, many remarkably fine specimens were exhibited before the Massachusetts Horticultural Society.

"The liberal premiums offered for this fruit, by the Society, have had the good effect of producing very general competition ; and so superior have been some of the specimens — so much larger than when first exhibited, evidently showing what care and attention will do for this as well as other fruits—that the Society have deemed it advisable to offer a high prize for a seedling, with the hope of still further improvement ; for, although what few attempts have been made in this way have not been attended with very favorable results, there is still good reason to believe that it will yield to the ameliorating influences of cultivation, as well as the strawberry, the gooseberry, or the raspberry.

"Our engraving represents a single cluster of the blackberry, of the ordinary size, under good cultivation. Several of the berries exhibited by Capt. Lovett, C. E. Grant, and other amateurs, the past season, measured *one and a half inches* in length.

"We can commend the blackberry to all lovers of fine fruit, as one which should in no case escape their attention. A dozen vines, when well established, will yield sufficient fruit for an ordinary family. For its cultivation we would refer to the article of Capt. Lovett, above mentioned ; merely remarking that the berries should be allowed to *get fully* mature before they are gathered ; otherwise much of their excellence is lost. They will drop from the stem, upon the least touch, when they are quite ripe."

Ladies' Department.

ANNUAL FLOWERS.

We are all prone, perhaps, to attempt to do more than we can *do well*. The ambition of the farmer is to add acre to acre, and field to field, although he has more in his possession than he can half cultivate. We see this in the flower garden as well as in the field. How often do we witness large flower gardens containing a great variety of half-starved, sickly flowers, contending for a bare existence with the surrounding weeds. A space of a few square feet, and containing but one or two varieties in perfection, would afford far more satisfaction. In our directions for flower gardening, we shall take it for granted that our readers have other and important duties to engage their attention, and that their labors in the flower garden are principally confined to an hour or so, morning and evening. We know of no better exercise or recreation for a leisure hour; and we never knew one who loved flowers, who was not better for it.

The first work is the selection of the ground and its preparation. A warm and sheltered position should be chosen, if possible, as on the south side of a fence or house; but care must be taken to select a place on which water will not stand. The ground should be deeply dug and well pulverized. If not rich, well rotted manure should be dug in. If the ground is clayey, and liable to become hard by the beating of the rain and the drying sun, some light mold from the woods should be added, or some sandy loam, or mold from an old pasture; one of which can be procured in almost any neighborhood.

After the ground is prepared the seed may be sown; but, a little caution is necessary, not to sow seed too thick, as beginners generally make this error. As there is some difficulty in sowing the finer seeds evenly, they may be mixed with three or four times the quantity of sand or ashes. They may be then lightly covered with fine mold, sifted over them—the smaller the seed, the lighter the covering. It is better to cover too lightly than too heavily. You now have nothing to do but to wait patiently till they "*come up*." Be sure and destroy all weeds as fast as they make their appearance. If your plants are too thick, which they are very apt to be, transplant them to other beds, or along the borders of the paths, choosing some showery day for this work. But be sure and remove them before the plants in the bed become crowded, or they will become injured — taking out the smallest and weakest plants. In removing plants, they should be taken up carefully, with a ball of earth attached, disturbing the roots as little as possible. This is better done when the ground is moist. The plants that are named in our last, and those which we may hereafter recommend, will need no further care except to keep the weeds destroyed and the ground in a mellow condition. Those who have the convenience, can raise a few plants in the hot-bed for early blooming. In this section of country, seed in the open ground should not be sown much before the first of May.

In planting, some attention should be given to the height of the plants, so that the larger do not hide those of a smaller growth. A little taste, also, is necessary in the arrangement of colors, to produce a good effect; but this will be learned by experience. We only intend to throw out a few hints, and leave the matter to the good sense and cultivated tastes of our readers.

In addition to the annuals named last month, we would recommend the *Nemophilas*, which are very beautiful, of a spreading habit, and about a foot in height. A new variety, (*Maculata*,) white flowers, spotted with purple.

Sweet Peas are very ornamental in patches.—Habit, climbing; flowers of various colors. Height from three to four feet. Like the common pea, they need sticks to support them.

Golden Bartonia is very showy, of a spreading habit. Flower golden yellow. About two feet in height.

Balsams, we need not recommend, for they are universal favorites. But those who usually cultivate them have but little idea of the beauty of the finer sorts. We saw them last season as large and as double as the rose.

Asters. These are gay star-like flowers, growing a foot or fifteen inches high, upright, but spreading when they once begin to branch. The original has a single flower, in shape like a daisy; but there is a great variety in gardens, and the double and full-quilled sorts only are prized. The colors are various; not only are there all shades of red and blue, both of which appear mixed with white, but the white is mixed singly with all the shades; so that the autumn garden is indebted to this flower for a good deal of its gay and brilliant effect. The Germans have raised many varieties, which are sold under the name of German asters; and the imported seeds generally produce very fine varieties. We have obtained some of the imported seed, and have some of our own raising that we know to be fine.

CHINA ASTER.

Of all the flowers we have named, and still others, we have procured the seed, and intend to supply those of our friends who apply. We shall do them up carefully and send by mail, so as to subject the receiver to single letter postage only. Our object in this is to encourage a love of flowers, by furnishing those with the finer sorts, who from their location are unable to obtain them. All we ask is that these little friends—some of which we watched over last season till we really loved them, and took with so much care from the parent flower—be not permitted to starve and perish in a hard and impoverished soil, surrounded by grass and weeds. Plant them in a good and generous soil, watch over them a little in their infancy, and protect them from their stronger enemies, and in a little while we and you shall have our reward. Our appreciation of the beautiful will be quickened; and as we love the beautiful in nature, we shall love the Author of nature's beauty. Show the flowers at your County Fair, and next season distribute the seeds among your neighbors, always exacting a pledge for their good usage.

Youths' Department.

A WALK IN THE GARDEN.

It is now the month of April, the snow has disappeared, the ground has become thawed, and partially dry. It is now time to commence gardening operations, and we will take a walk in the garden, as it is a favorable time to see the commencement of the work for the season; and if you are observing, you can hardly fail to learn much that will be useful. You notice the frames and glass on the south side of the high and tight fence. This is the hot-bed. It was probably prepared about the 1st of March. We will examine it, and see what it contains.—There you see lettuce large enough for the table, radishes growing finely, cucumbers in blossom. In another frame you see cabbage, and tomato, and celery plants. These you see can all be raised much earlier in a hot-bed than in the open ground. Plants are thus raised for planting out in the open ground, as soon as we could plant the seed. The heat is obtained from the pile of manure on which you see the frame placed. You have often seen the steam ascend from a pile of manure when turned over. About six inches of earth is placed on the manure, and the seeds planted in the earth.

You see that the greater part of the garden was dug in the fall, and left in ridges. This was done to allow the frost to enter the ground for the destruction of worms and insects that would be apt to injure the crops. Frost mellows the ground. You notice how soft the roads become after frost. A little further on we see a man digging. We will look at him a little while. He has a new spade, and see how deep he drives it in with his heavy boot. Some plants send their roots deep into the ground, in search of nourishment, and it is best to dig or plow deep to allow them an opportunity to penetrate the earth. The rains, too, descend to nourish the plants; when, if the ground was dug only a few inches, the greater part would either lay on the surface or run off. Some times gardeners dig two spades deep, and this they call *trenching*. Digging and plowing are both for the same purpose—to make the ground light and mellow, so that roots of plants can penetrate it in search of their proper food. If we were to sow seeds or plant trees or shrubs in the hard ground, if they grew at all it would be a very poor and sickly growth. Notice what pains the gardener takes to have every spade-full well broken up. He turns it bottom upwards, as he throws it from his spade, and if this does not entirely loosen the particles of earth, he strikes it with his spade. Weeds are thus buried, where they rot, and form manure. These trenches you see open, are to drain the surplus water from the ground. They will be partly filled with stones or tile, so as to leave a channel for the water, and then covered.

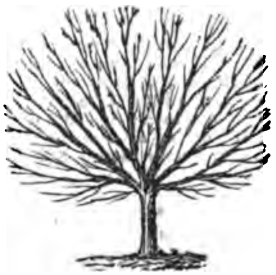
Now that he has dug quite a piece, he *rakes* the surface with an iron-tooth rake, and you see how much pains he takes to break every large piece of earth, and before he leaves it, not a stone or lump of earth is to be seen. This is intended for fine seed, and you can readily imagine how much better this nicely prepared land will be for such seed, than though it was rough and uneven, where many of the seeds would be uncovered and thus perish, and even those seeds that happened to fall in a favorable spot, would find their roots obstructed before they had proceeded far, by hard balls of earth, and crevices, into which the drying winds penetrate, causing their destruction.

The peas are already up and growing finely.—This must be some early sort, probably the *Early Emperor*, which is the earliest kind. The gardener, if he wishes green peas for a long time, will sow a few every two or three weeks.

The *Pie plant* is just making its appearance, and it has received a good dressing of well rotted manure. Manure is dug in around all the fruit trees, and the ground looks as though it had received a liberal supply; for every good gardener knows he cannot raise good vegetables without plenty of manure.

The *grape vines*, currant bushes, and fruit trees, have all been *pruned* and put in order, the gardener taking off such branches as he thonght necessary to make them of a good *form*, and bear *fine fruit*.—We have not time now to talk of pruning, but some other time we will try to show you how and why, the gardener prunes his trees.

You will observe that all the peach trees have had the ends of the shoots cut off. This was done early last month. Nearly all the old peach trees you see in gardens have three or four long branches, without a leaf or branch, except at the extreme ends. They are easily broken by the wind, soon become old and useless, not living out half their days. But these trees have a very different appearance, and for future reference we will make a drawing of one of them. We may not get every limb in its place, but we can easily get the general form and appearance. The sap which furnishes the tree with nourishment has a disposition to go to the ends of the shoots, causing the buds there to grow, and leaving the buds further back to perish. By cutting off the tops of the shoots, the buds at the lower ends of the branches obtain sufficient sap to nonrish them; and thus they grow, and the tree is supplied with enough branches to make a fine shaped head, as we have made in the drawing.



In this part of the country it is yet too early to sow radishes, beets, beans, and other tender vegetables. The earth is not yet warm enough, and they would be apt to be destroyed by frosts. But sometimes gardenors put in a few, and if the season is favorable, they succeed and very early vegetables are obtained; if not, the ground is planted again. No sensible gardener will put in the main crop till there is little danger of frost. Peas and lettuce being quite hardy, they can be sown very early.

In the border on the north side of the garden early potatoes are planted. The ground being yet cold, they are slow in coming up; but as the sun gets a little warm, they will make their appearance, and we shall have potatoes fit to dig by the first of July.

The raspberries are all nicely tied up, and the strawberry beds have all been raked over, and the dead leaves removed. The black looking mold that you see mixed with the soil, is well rotted manure that has been dug in with the fork. Every thing appears to be in good order, and during the summer we shall see the fruits of this good management. We will visit the garden again next month.

Editor's Table.

THERE can be no better evidence of the progress of agricultural improvement, than is furnished by the increased circulation of agricultural journals. We rejoice then to learn that the agricultural papers generally are receiving increased support—that their field of operations is enlarged, and consequently their ability to do good. The price of the Genesee Farmer is too low to render its publication a matter of individual aggrandisement; but as long as our friends show the same willingness to lend a helping hand that they have the present year, they shall not want a *good* and *cheap agricultural journal.* Through the exertions of voluntary and unpaid agents, our circulation the present year has nearly doubled, and we now have on our books more than 35,000 regular subscribers, and the number constantly increasing. If each of these papers are read by *four* individuals, we have, then, about 150,000 regular readers. The question is not with us how we shall furnish each subscriber with the value of his subscription, which we think we have ever been able to do, but how we shall render the Genesee Farmer of the greatest possible benefit to its numerous readers. The principles of vegetable economy are the same the world over, and though we have large lists of subscribers in every state and territory in the Union, not excepting California and Oregon, and in British America, as well as Great Britain and Ireland, we do not despair of being able to make our journal at once interesting and profitable to all.

MODE OF PREPARING CLOTH FOR HOT-BED FRAMES. — In consequence of an error in our last, we republish the method of preparing cloth for hot-bed frames:

"Take white cotton cloth of a close texture, stretch and nail it on frames of any size you wish; take 2 oz. of lime water, 4 oz. of linseed oil, 1 oz. white of eggs, 2 oz. yolk of eggs; mix the lime and oil with very gentle heat, beat the eggs well separately, and mix with the former. Spread this mixture with a paint brush over the cotton, allowing each coat to dry before applying another; until they become water proof."

☞ WE refer those who have sent us lists of subscribers, to our offer of premium books in our January number.—Those who wish to increase their clubs so as to claim either of the books offered, will do so as soon as convenient. Those who wish any particular work will please inform us, otherwise we shall use our own judgment. Those who are entitled to premiums, and to whom they have not been sent, will receive them this month. In most cases they have been forwarded.

☞ WE have been requested by several correspondents to notice a very foolish attack of a certain pugnacious editor at the West. We beg to say that we consider the man and his motives rather beneath notice.

☞ MANY communications have been received too late for insertion or notice this month, and many more for which we could not find room.

Osage Orange Seed.

THE subscribers have just received a supply of fresh, well saved Osage Orange seed, warranted to vegetate freely, *not* being taken from the fruit by the common process of boiling. Price $1 per quart, or at a reduced rate by the bushel. Printed directions furnished for its culture.

Also, Honey Locust, Yellow Locust Seed, &c.

J. M. THORBURN & CO.
April, 1851 15 John Street. New York.

Morgan Horse, "General Gifford."

THIS justly celebrated horse will stand the ensuing season at the stable of the subscriber, in Lodi, Seneca county, N. Y.

A likeness and description of this animal may be seen in the March number of this journal, page 64, and also in the Rural New Yorker, under date of 6th March.

Terms of insurance, $12. Pasture provided for mares from a distance at the usual rates.

April, 1851. CHAS. W. INGERSOLL.

C. J. RYAN & CO.,

WOULD most respectfully call the attention of the public, particularly the trade, to their Nursery Stock, consisting in part as follows:—

Apple Trees, 3 and 4 years old, all the most popular long keeping varieties............$18 per 100.

Northern Spy, 3 and 4 years old............$25 per 100.

Cherry Trees, the principal varieties, from 5 to 10 feet high, straight stems, and headed............$25 per 100.

HEDGE PLANTS.—Arbor Vitæ. American, 1 to 4 feet high, $5 per 100; Hemlock Spruce, 1 to 4 feet high, $5 per 100; Privit, strong thrifty plants, $4 per 100.

5000 Giant Rhubarb Roots, fine productive sorts, for hotels and market gardeners............$10 per 100.

Myatt's Victoria Rhubarb, *true sort*............$4 per doz.

Downing's Colossal, extra fine flavored and tender .$4 per doz.

1500 select and very choice Verbenas, in fair condition for bedding out, such as Anacreon, Scarlet Defiance, Polka, Loveii, Rosy Morn, and a dozen other varieties............$1.50 per doz.

Also Petunias, Scarlet Geraniums, Prize Double Dahlias, &c. &c. For particulars, see March number of the Farmer.

☞ Rochester and Charlotte Plank Road Nurseries, Rochester, N. Y. City Office, 16 Reynold's Arcade, Rochester, N. Y.

March 1st, 1851.

Linnæan Botanic Garden and Nurseries.

WM. R. PRINCE & CO., FLUSHING, L. I.

WM. R. PRINCE & CO., sole proprietors of this ancient establishment, would respectfully invite the attention of Amateurs, Nurserymen, and others, to their fine and extensive collection of Fruit and Ornamental Trees, Plants, Shrubs, Roses, and Green-House Plants, &c, which are offered for sale on terms much below former prices. Their Fruit being propagated from bearing trees on their extensive specimen grounds, enable them to guarantee the varieties to be genuine and true to name. Their trees are well formed and thrifty, and such as will give complete satisfaction. To Nurserymen wishing trees in quantities, by the hundred or thousand, they are enabled to offer very liberal discount. Their extensive collection of Standard and Dwarf Pears, their new varieties of Italian and French Peaches, and many new and superior fruits of other kinds, are well worthy the attention of all lovers of fine fruit. Their collection of Roses is the most extensive of any Nursery in the country, and many new varieties have been added to their collection.

Orders for Trees from any part of the country will meet with prompt attention, and goods be packed so as to insure their safety to any distance.

Catalogues with a detailed list of prices, will be sent to all post-paid applicants, or can be had of our city Agents, CLARK, AUSTIN & SMITH, 205 Broadway, New York.

N. B.—The public will please not confound this with the Nursery of Winter & Co., who have taken the title of this establishment, but who are selling out and closing their business.

April, 1851. [4-1t*]

Clover and Grass Seed.

WE would respectfully call the attention of Farmers and others to our stock of Grass Seeds.

We have now in store and offer for sale at the lowest cash prices—

250	bushels	Ohio medium Clover Seed.
50	do	Seneca Co. large do.
20	do	Wheatland do do.
1000	do	first quality Timothy Seed.
10	do	Orchard Grass Seed.
10	do	Italian Ray Grass Seed.

For sale at the Genesee Seed Store and Agricultural Warehouse, No. 65 Buffalo street, Rochester. J. RAPALJE & CO.

April, 1851.

Tobacco Seed.

THE subscribers have just received a small quantity of the Broad Leaf Connecticut Seed Leaf Tobacco, a pure and fresh article. Price $1,00 per oz.

Also, genuine Havanna Tobacco Seed from one of the most celebrated plantations on the island. Price $1,00 per oz.

Maryland Tobacco Seed, in varieties, at 50 cts. per oz.

Kentucky Tobacco-Seed, at $1,00 per oz.

J. M. THORBURN & CO.
15 John Street, New York.

☞ The largest collection of Vegetable, Flower, Field and Garden Seeds, to be found in the United States. Catalogues on application.

April, 1851.

Genesee Seed Store and Agricultural Warehouse,

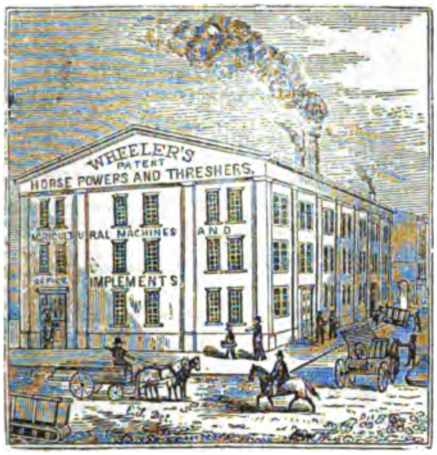
NO. 65 BUFFALO ST., ROCHESTER, N. Y.

J. RAPALJE & CO., Wholesale and Retail Dealers in all kinds of Imported and American Garden Seeds, Agricultural Implements, Reaping Machines, Horse Powers, Threshing Machines, Fanning Mills, Ploughs, &c., &c. J. RAPALJE.
April, 1851. W. S. RAPALJE.

Seed Corn.

A VERY choice lot of Early Dutton, eight-rowed, White Flint, and other varieties, for sale in the ear, by

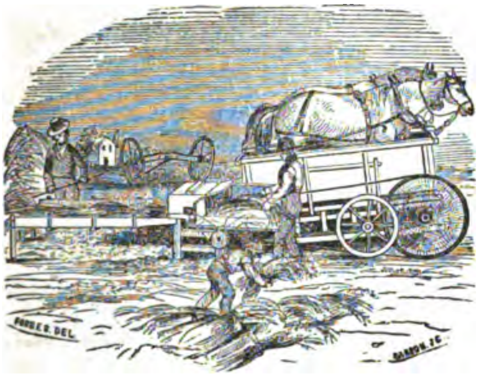
J. P. FOGG & BROTHER,
April, 1851. Rochester Seed Store.



New York State Agricultural Works.

AGRICULTURAL MACHINES AND IMPLEMENTS.

WHEELER, MELICK, & CO. continue their Manufactory at the corner of Liberty and Hamilton Sts., Albany, where they are prepared to fill all Orders with despatch.



Orders for WHEELER'S PATENT RAILWAY, CHAIN HORSE POWERS, and OVERSHOT THRESHERS & SEPARATORS, will receive their prompt attention. The large and increasing demand for these Machines, has induced the proprietors to erect a new and spacious Manufactory, and otherwise extend their means of promptly filling orders. Their Powers and Threshers have been sold in nearly every State in the Union, during the past year, and their superiority has been acknowledged by numerous testimonials, not only from Agricultural Societies but from persons who have used them. They have been awarded the first premiums at all the principal Fairs where they have been exhibited in operation, including the Pennsylvania State Fair, the Provincial Fair of Upper Canada, and the Michigan and Ohio State Fairs, together with numerous County Exhibitions in the different States.

The Two Horse Machine with from three to five hands, will thresh from 125 to 200 bushels of Wheat per day, or twice that quantity of Oats.

The One Horse Machine will thresh rather more than half that quantity.

PRICE AT ALBANY.

For Two Horse Machines,	$145.00
For One Horse Machine,	120.00

Machines will be shipped to order to any part of the United States or the Canadas, ☞ *and warranted to give satisfaction to the purchaser, or they may be returned within sixty days.*

The subscribers also Manufacture and will furnish to order the most approved kinds of Feed Cutters, Clover Hullers, Circular Saw Mills, &c., &c.

They will also furnish Horse Powers properly geered for driving Churns, Elevating Grain, or other purposes to which Horse Power can be applied.

WHEELER, MELICK & CO,
Corner of Hamilton and Liberty Sts., Albany, N. Y.

For sale by J. RAPALJE & Co., at the Genesee Seed Store and Agricultural Warehouse, 65 Buffalo St., Rochester, N. Y.

CAUTION.

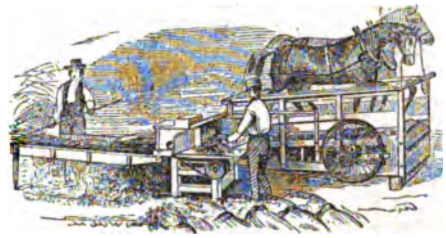
The subscribers, Patentees of *Wheelers Patent Horse Powers*, having noticed that an Agricultural Firm is advertising that Wheeler's Patent Horse Powers and Overshot Threshers are manufactured and sold by them, when in fact they have not obtained from us any liberty to use our Patent, we hereby caution all persons that said firm has no right to use our Patent, or to manufacture or sell said Horse Powers, and that a sale by them will confer no right upon the Purchaser to use such Power.

Messrs. WHEELER, MELICK & CO., of Albany, and their Agents, are the only persons authorized to make or sell *Wheeler's Patent Horse Powers*; and every such Power made or sold by them, or by any person having a License to do so, has upon one of the Cast Iron Semi-Circles at each end of the Power, the words "WHEELER'S PATENT—WHEELER, MELICK & CO., MAKERS, ALBANY, N. Y."

A due attention to this fact will enable purchasers to avoid imposition and fraud.

No person or firm in Albany, except Wheeler, Melick & Co., is authorised to make or sell said Horse Powers.

Albany, April, 1851. A. & W. C. WHEELER, Patentees.



Emery & Co.'s Latest Improved Premium Rail Road Horse Powers.

WARRANTED superior to any other kind before made or sold by us. For particulars, descriptions, &c., see catalogue of Albany Agricultural Works Warehouse and Seed Store, furnished gratis on application by mail. Also, see Genesee Farmer for March, 1851.

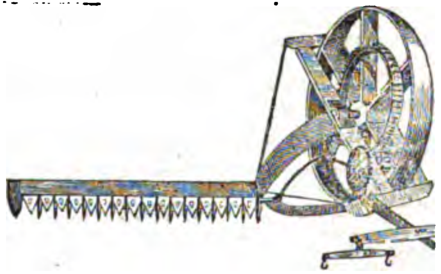
Price of new Power, for two horses,	$110.00
" " " " " one horse,	80.00
" " Saw Mill, (24 inch saw in order for use.)	35,00
" " Threshing Machine, with Separator, of one horse Power.	35,00
Price of Threshing Machine and Separator, for two horse Powers, (if sold with Power, $35) without Power.	37,50
Price of sett of Bands, Wrenches, &c., complete, for all the above machines.	5,00

Also, Wheeler's Rock and Pinion Horse Powers and Threshers manufactured by us, and warranted equal in all respects to any of the kind made, which we offer, and guarantee the purchaser the full privilege of using the same, for the following prices:

Two Horse Power,	$100.00
One Horse Power,	75,00

The Threshers not being patented the prices are the same as above, which are very low, considering the quality as now made, being much heavier, with more spikes than the ordinary Threshers sold by us.

H. L. EMERY & CO.,
April, 1851. 369 and 371 Broadway, Albany, N. Y.



KETCHUM'S PATENT MOWING MACHINE.

THE subscribers having purchased the entire interest of the inventor, Mr. Wm. F. Ketchum, and also the interest formerly owned by S. W. Hawes, are now manufacturing the above Machine in the city of Buffalo. The Machine has been greatly improved, and is fully capable of performing all we recommend it to do, and capable of cutting 12 to 15 acres of grass per day with 1 span of horses.

The price of the Machine is $100,00 with one sett of knives, and $110,00 with two sett of knives.—Cash in Buffalo.

Any information wanted, or orders left with Mr. GEORGE SHEFFER, Scottsville, Monroe Co., or Mr. MORGAN BUTLER, New Hartford, Oneida Co., will meet with prompt attention.

G. W. ALLEN & CO.

Office at the store of HOWARD, NEWMAN & Co., foot of Lloyd street. February, 1851.

DOMESTIC ANIMALS AT AUCTION.

THE postponed yearly sale of Full Bred Short Horns and Improved Dairy Stock, consisting of about fifty head, will come off at my farm on Tuesday, June 24th, 1851, at 12 o'clock, M. I shall dispose of all the improved Dairy Stock, which is composed of the finest Short Horn, with a slight cross of Amsterdam Dutch, which some writers say was part of the original ingredient which composed the improved Short Horns.

I am now breeding Short Horns, Devons and Ayrshires, each separately and pure, which, owing to the limits of my farm, make it necessary to confine myself to those three breeds. By the awards of the State Agricultural Society, the American Institute, and my own County Society, (with the exception of last year, when I was not a competitor at either,) it will fully appear that I have been a very successful exhibitor. The Cow which won the First Prize as a milker, at the American Institute last year, was bred by me, and composed of the above alluded to Dairy Stock. Several of the Bulls got by Lamartine will be of the most appropriate age for efficient service the coming season. All Cows and Heifers old enough, will be warranted in calf at the day of sale, by my imported Bull, Lord Eryholme, or my celebrated Bull, Lamartine.

I own two thorough bred Devon Bulls; one the celebrated old Major, the other, one and a half years old, imported by me from Devonshire. One of the above animals will be sold—which, I have not yet determined.

A full Catalogue, with the pedigree of each animal, will be published in due time, with minute description of sale, &c.

I also have a number of Suffolk Sows, in pig to my imported Boar, most of the progeny of which will be old enough to dispose of on that day.

I also have about 20 South Down Ewes, most of which I imported from the flock of Jonas Webb, and now in lamb to my imported Buck, Babraham. Some of the Buck Lambs will be offered at auction on that day.

This sale will not only offer an opportunity to obtain Stock from my previous herd, but will also enable persons to procure calves from my imported Bull, lambs from my imported Ram, and pigs from my imported Boar—all of which animals were recently selected by me in person, when in England.

The mode of warranting the Cows and Heifers in calf, is this: in case they prove not to be so, it shall be optional with the purchaser, on his *certificate of that fact*, either to receive from me $25 (say twenty-five dollars) or to send the cow to my farm, and I will keep her the proper time (free of expense) to have her got in calf to either one of my Bulls, which he shall choose. I will give $25 for any Heifer calf from either of the Cows or Heifers sold at the sale, delivered on my farm, at two weeks old.

Stock purchased to be sent at a distance, will be delivered on ship-board or railroad in the city of New York, free of risk or expense to the purchaser.

Persons living at the South, in a climate to which it would not be well that stock should be transported at that hot season of the year, may let such animals as they may purchase, remain with me until the proper season, and I will have them well taken care of, and charge only a reasonable price for their keep. One of my objects in breeding improved domestic animals, is to assist in distributing them throughout the Union, deeming it one, if not the most important feature to promote profit to the cultivator of the soil, and to benefit the consuming country at large.

All communications through the Post please pre-pay, and I will pre-pay their answers, and also a Catalogue if required. Catalogues will be to be had at all the principal Agricultural Warehouses and offices of the principal Agricultural Journals, on and after the 1st day of June next. Persons wishing to view the stock at any time, will find my superintendent, Mr. Wilkinson, to give them the desired information when I am at not at home.

Dated, this 4th day of March, 1851, at Mount Fordham, Westchester County, eight miles from the City of New York, by the Harlem Railroad. [4-3t] L. G. MORRIS.

The Thorough Bred Blood Horse, Sir Henry,

WILL stand, at the stable of the subscriber, through the season, and let to Mares at $10 each. The subscriber takes this method to inform gentlemen of Western New York who have heretofore, and others who would seek to, patronise him, they will find such accommodation and attention as they may desire, and upon the most reasonable terms. It perhaps will be needless to enter into a detail of pedigree here, but suffice it to say, he is descended through all the generations that are recorded in the English Turf Register. There is no horse living that can boast of a more illustrious pedigree.

SIR HENRY is of a beautiful unfading bay color, stands 16 hands and 1 inch high without shoes, is compact and short legged for a blood horse, yet of a rangey and majestic figure. His action is graceful, but at the same time proud and commanding. Sir Henry was purchased by Wm. V. Wilson, Esq., of Ridgeway, Orleans co., at the State Fair held at Utica, in 1845, for $800, when but five years old. His stock has been sought for, and at great prices. Matched geldings have brought $1200 a pair, single geldings have sold for $700, and owners of young stallions have refused $600 and $800, in many instances, and one has refused $1000 for his horse

The proprietor, after numerous attempts and at a great price, succeeded in obtaining this horse and brought him to this place, where he has been kept two years, and now, out of convenience to himself, will remove to Bergen Corners, Genesee co., a distance of four miles, where he expects to receive his usual amount of patronage. BILLING RICHMOND, JR.

Riga, N. Y., March, 1851. [4-1t*]

Great Sale of Superior Thorough-Bred Short Horn Cattle.

THE subscriber having more Stock than he can well sustain on his farm, will offer at Public Auction about THIRTY head of his Improved Short Horn Cattle, consisting of Bulls, Cows, Heifers and Bull Calves, on the 26th day of June next, at his farm 2½ miles from this city.

It is known to breeders of improved stock, in this country, and in Canada, that the proprietor of this herd during the past 12 years, has through the medium of importations from England, and selections from the best herds in this country, spared no expense to rear a herd of cattle from which superior animals could be safely drawn for improvement and crosses upon other breeds. His importations have been derived from that eminent breeder, the late Thomas Bates, Esq., of Kirklevington, Yorkshire, England, which herd it is well known has recently been disposed of at public sale by his adminstrators, and dispersed into many hands, and can no longer be resorted to as a whole, for improvement. The announcement of that sale created great interest, and all Short Horn breeders in England seemed emulous to secure one or more of these animals to mingle with the blood of their own herds, and at the day of sale, there was found assembled the largest audience ever before witnessed upon a similar occasion, numbering, as was said, from 4 to 5,000 persons, and among them the best breeders in England, and several from other countries. Some of the animals bro't prices which seemed incredible to many.

In the herd now offered for sale, will be included the Imported Bull, Duke of Wellington, and the premium Bull, Meteor. These are Bates' Bulls, and their reputation as stock-getters are too well known to need any comment. I am authorised to say by Lewis F. Allen, Esq., of Black Rock, one of the most prominent breeders in this country, and who has had ample means of forming a judgment, "That in no instance, to his knowledge, had these two Bulls been bred to Short Horn Cows of other herds, previously imported into the United States, but that their produce were superior in general qualities to such herds."

The most of the Stock which is now offered for sale, have been bred from these two Bulls; and the proprietor, having a young bull more remotely connected with that portion of the herd he retains, (being about 14 in number,) can spare these two valuable Bulls. There will be in the Stock offered for sale, 6 young Bulls, from 8 months old to 2 years, in addition to the two named above; and the remainder of the Stock will be composed of Cows, (most of them possessed of extraordinary milking qualities,) Heifers and Heifer Calves. It is believed that no herd of Short Horns has ever been offered for sale in this country, exhibiting more of the valuable combinations of qualities which contribute to make up perfect animals.

A Catalogue containing the pedigrees of these animals will be ready for delivery at an early period, in which the Terms of the Sale will be particularly stated. A Credit will be given from Six to Eighteen months. Gentlemen are invited to examine the herd at their convenience. GEO. VAIL.

Troy, N. Y., March, 1851. [4-3t]

Young Morgan Tiger & Sampson Chief

WILL stand, the present season, on Fridays and Saturdays at the stable of Lewis B Baldy, Seneca Falls, and all other days of the week at the stable of the subscriber, two miles south-east from Clyde.

MORGAN TIGER is a beautiful dark bay, over 16 hands high, possessing figure and action unsurpassed by any horse of his celebrated stock, and no evidence can be so satisfactory of his superior qualities as a personal examination of him, and his stock, now one and two years old. He was sired by old Morgan Tiger, formerly owned by Doct. MAY, of Palmyra; dam, by Sir Charles Durock. He was awarded the first Premium at the Wayne Co. Fair, 1850.

SAMPSON CHIEF was sired by the English Draft Horse Sampson, imported by John Robinson, of Palmyra; dam, a Nimrod mare. He, and his stock, are highly prised by farmers and others needing horses of his class. Terms, for either horse, $8 to insure. Pasture, on the farm of the subscriber, at reasonable charge. Accidents at the risk of owners

Persons wishing to inquire respecting these horses, are referred to Messrs. Hiram Woodruff, Auburn; John L. Hubbard, Waterloo; D. W. Colbin, Geneva; Ab'm Parish, Batavia; and many other gentlemen who know them and their stock.

ISAAC M. GILLET.

Clyde, N. Y., March, 1851. [4-2t*]

Agricultural Bookstore.

123 FULTON STREET, NEW YORK.

THE subscribers have for sale the largest assortment of Agricultural Books in this country. Almost every work useful to the Farmer and Mechanic, both European and American, may be found at their store. Orders from any part of the country promptly supplied at the lowest prices, for Cash or approved credit.

N. B.—Also a full assortment of Theological, Classical, School, Miscellaneous, and Blank Books, and Stationary.

April, 1851. VAN NOSTRAND & TERRETT.

THE NEW YORK REAPER.

MANUFACTURED BY SEYMOUR & MORGAN.

WE hope our friends and those wishing to purchase the New York Reaper will give in their orders early, as last year we were unable to supply the demand. See last number of the Farmer for particulars. SEYMOUR & MORGAN.

Brockport, N. Y., April, 1851.

Thorp, Smith, & Hanchett,

PROPRIETORS OF THE SYRACUSE NURSERIES,
SYRACUSE, N. Y.,

CULTIVATORS of. and Dealers in. all kinds of Fruit Trees, Ornamental Trees and Shrubs, Green House Plants. Bulbous Roots, Hedge Plants. Seedlings, &c.. &c.. offer for the spring sales

A very large stock of the best varieties of Apples, Cherry, and Peach Trees.

A choice selection of native and imported Plum Trees.

And a splendid importation of Pyramidal Pear Trees on Quince, from 5 to 7 feet high. at 50 cts. each. consisting of nearly one hundred of the most celebrated varieties, old and new. These trees have invariably given the most entire satisfaction, and are sold at a quite unusualy low rate

They have also for sale a large assortment of Ornamental Trees, Shrubs, Vines, Green-House Plants, Evergreens, and Plants for bedding out, among which are

Deodar, and Lebanon Cedars, 3 to 5 feet, price $2 each ; Japan Cedars ; Magnolias ; Daphnes ; Altheas ; Honeysuckles ; Dahlias ; Roses of all classes. including *Fortune's China* ; Phloxes ; Petunias ; Verbenas ; Maurandias ; Lophasphernums ; *Calestegia Pubescens*, a new and beautiful climber, covered with a profusion of large double flowers of a delicate rose color from June till cold weather ; Heliotropes ; Geraniums ; Salvias ; Double Feverfews ; Plumbagos ; Tree and Herbaceous Pæonies ; Double Lichnes, &c., &c., all of very superior quality and beauty.

☞ Persons favoring us with their orders shall have no cause to complain of the quality of any articles sent them.

☞ Catalogues sent gratis, as usual, to post-paying applicants.

N. B.—T., S., & H. have formed a partnership, under the firm of THORP, SMITH, HANCHETT, & Co., to take place in May next, with Mr. A. FAHNSTOCK, a skillful, practical, and intelligent nurseryman and propagator, who will superintend the management of the Green-House department. which they design shall constitute, henceforth, an important feature in their business By this arrangement, they become joint proprietors with him in the "Augusta" Rose, an acquisition to the floral world which is destined to create a marked sensation. It will be sent out in the Spring of 1852. [4-2t]

Genesee Valley Nurseries,

BY A. FROST & CO.

SOUTH SOPHIA STREET, ROCHESTER, N. Y.

THE proprietors of this establishment wish to call the attention of Nurserymen. Fruit Growers and Amateurs to their present stock which is partly embraced in the following :

Apple Trees 18¾ cts. each, $15 per 100. Standard Pear Trees. 2 years old, 40 cts. each. Dwarf do. do. on the Angers Quince, 30 to 50 cts. each. Plum Trees, 50 cts. each. Standard Cherry Trees 5 to 8 feet high, with fine heads, 35 cts. each. Standard Cherry Trees, 3 to 5 feet, 30 cts. each. or $25 per 100. Peach Trees, 2 yrs. old. from bud, very thrifty. 12½ cts. each, or $10 per 100.

All of the above trees are worked with the choicest and newest of their respective kinds, and are remarkably thrifty and well grown. Gooseberries, Raspberries, Strawberries, Currants, &c., all of the newest, and the most of lately imported kinds.

Ornamental Trees, Shrubs, Plants, &c., embracing all the rare and most ornamental kinds.

Green-house and bedding plants in great variety, including a large and most splendid collection of double dahlias.

The above plants will be packed carefully and left at any of the Freight Offices in the city, according to advice, without an extra charge.

Our new descriptive catalogue of the above fruits, and giving a general description of the articles now under cultivation, is ready for distribution. and will be mailed gratis to those that apply post-paid.

☞ Office No. 47 Exchange street. [4-2t]

Fruit and Ornamental Trees,

AT THE GENEVA NURSERY, N. Y.

THE proprietors of this establishment invite the attention of Planters and Dealers, to their very large and extensive collection of Fruit and Ornamental Trees, Shrubs, &c. These Nurseries are very large. from 15 to 20 acres. The trees are large. handsome, and thrifty growth, raised on a clay and gravel soil. It has been the study of the proprietors for many years in the business, to select only those varieties worthy of cultivation. and universally approved ; and from the extensive patronage they have received. believe they have given complete satisfaction.

We have, also. a large collection of Strawberry Plants. of all the new and choice varieties ; also. Hedge Plants. Buckthorn. English Thorn Seedlings of Cherry, Pear. and Horse-Chestnuts.

50,000 European Mountain Ash, of one year's growth, of uncommon size. $10 per 1000.

Scions furnished of all the new and rare varieties.

All orders promptly attended to, and Trees carefully packed for transportation. W. T. & E. SMITH.

Geneva, N. Y., March, 1851. [4-1t*]

The Old Rochester Nursery

CONTAINS the usual Stock of Trees and Shrubs, Ornamental and Utilitarian. The entire satisfaction which orchards have given where the selections have been left to the proprietor, supercedes the necessity of a lengthy advertisement. Catalogues gratis Orders solicited, and Trees properly packed for all parts of the continent. SAMUEL MOULSON,

36 Front Street, Rochester.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

A. SAUL & CO., beg leave to call the attention of *Dealers* and *Planters* of Trees, and the public in general, to their very large and complete stock of

FRUIT AND ORNAMENTAL TREES,

Which they offer for sale the coming spring. The Trees of their Nurseries are all *grown* on the premises and propagated under the immediate supervision of Mr. Saul, whose long connection with this establishment, is some guarantee for the accuracy of the stock now offered for sale. It consists in part of over—

20.000 Pear Trees. 5 to 8 feet high. and embracing all the leading standard varieties, as well as those recently introduced, of merit. either of American or Foreign origin

20,000 Apple Trees of *extra size*, 8 to 10 and 12 feet high, including every variety worthy of cultivation.

10,000 Plum Trees, 5 to 8 feet, of every known kind of reputation, as well as all the novelties of recent introduction.

10.000 Cherry Trees, 6 to 8 feet and over, among which may be found all the desirable and choice varieties.

A large stock of handsome Peach, Apricot, Nectarine and Quince, in every variety.

Also, Grape Vines (native and foreign,) Raspberries. Gooseberries and Currents, and Strawberry plants. of all the most approved kinds, as well as excellent roots, such as Asparagus, Rhubarb. Sea Kale. &c., &c.

Pear on Quince, Cherry on Mahaleb, and Apple on Paradise stocks—for Pyramids or Dwarfs for garden culture, and embraces all the kinds that succeed on these stocks.

DECIDUOUS AND EVERGREEN ORNAMENTAL TREES AND SHRUBS.

Embracing all the known kinds suitable for street planting of *extra size* ; also, the more rare, and select, as well as all the well known kinds suitable for Arboretums. Lawn and and Door-Yard planting, &c.. including Weeping Trees, Vines, Garden and Climbing Roses in great variety. Hybrid Perpetuals, Hybrid China, Hybrid Bourbons, Hybrid Damasks, Hybrid Provence, and Bourbon, Tea, China, and Noisette, and Prairie and other Climbing Roses.

A large quantity of Arbor Vitæ for Screnes, Burkthorn, Osage, Orange and other hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere.—For further particulars see catalogues, a new edition of which is just issued, and will be forwarded to all *Post-Paid* applicants by mail. A liberal discount will be made to persons who buy to sell again, and extensive planters on their own account.

P. S.—Frieght paid to New York.

Newburgh, March 1st 1851. [3-2t]

Auburn Nursery.

THE proprietor has now ready for sale *Ten Thousand* Apple Trees, 4 and 5 years old, from 7 to 9 feet high, comprising all the leading standard varieties, propagated by himself and warranted genuine.

Also, a good assortment of Pears on their own roots, and on Quince for Dwarfs ; and Cherries. Peaches, Apricots, Gooseberries, Currants, Raspberries, Ornamental Trees, Shrubs, Roses, &c. &c. Also a quantity of Buckthorn for hedges.

All of the above articles can be furnished of good quality, and as reasonable as at any Nursery in the State.

Catalogues sent to all post-paid applicants.

S. S. GRAVES.

Auburn, N. Y, March, 1851. [4-2t*]

Monroe Nursery.

THE subscriber deems it almost superfluous to publish an advertisement at this time, from the fact that his Nursery is so universally known ; yet he would beg leave to say to his friends and the public, that his experience as a Nurseryman of eight years is certainly some guaranty that the articles purchased of him would be correct and adapted to modern cultivation. Of the different fruits, he only cultivates a few varieties, such as has been proved and acknowledged to be the best.

He has a good stock of Apple, Pear, Peach, Apricot, Grape, Shrubs, Tuberous, Bulbous and green-house plants at reduced prices. Dahlias also of latest varieties.

Greece, March 1. 1851. [3-3t.] CHAS POWIS.

Penfield Nursery.

THE subscribers offer for sale at their Nursery, in the village of Penfield, a very extensive assortment of unusually large and thrifty Fruit Trees of the most approved varieties, some of *extra* size, from 8 to 12 feet high, and from 3 to 5 years growth, for Orchard culture, at $16 per 100. Persons wanting Trees to sell again, will be liberally dealt with.

HENRY FELLOWS & SONS.

Penfield, N. Y., March, 1851. [4-1t]

Corn Shellers.

A NEW article, only one foot in diameter, the latest improvement. Price only $3,00. It can be seen in operation at the Seed Stores of J. RAPALJE & CO., and J. P. FOGG & BROTHER, No. 29 Buffalo street, Rochester, opposite the Arcade.

April. 1851.

Field Peas.

500 BUSHELS Early Canada and Marrowfat Peas, free from bugs, for sale by J. P. FOGG & BROTHER,

April, 1851. 29 Buffalo street, Rochester.

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A New Work on Fruit.

CHARLES SCRIBNER (late Baker & Scribner) has in press, and will publish early in April,

"THE FRUIT GARDEN,"

A Treatise intended to illustrate and explain the Theory and Practice of all operations connected with the Propagation, Transplanting. Pruning and Training of Orchard and Garden Trees, as Standards, Dwarfs, Pyramids, Espaliers, &c., the Laying out and arranging different kinds of Orchards and Gardens, the Selection of Suitable Varieties for different purposes and localities, Gathering and Preserving Fruits, Treatment of Diseases, Destruction of Insects, Description and Uses of Implements, &c., *Illustrated with upwards of One Hundred and Fifty Figures*, representing the Different Parts of Trees. Practical Operations Modes of Training, Designs for Plantations, Implements, &c. By P. BARRY, of the Mount Hope Nurseries, Rochester, N. Y. 1 vol. 12 mo.

SUMMARY OF CONTENTS.

PART I. Describes the different parts of Fruit Trees—Roots, Stems, Branches, Leaves, Blossoms and Fruit; explains their different Characters, Functions, and Practical Classifications. It treats, also, of Soils and Manures, of the best Modes of Propagation, and the General Principles and Practice of Pruning.

This Part is a new feature in Treatises of this kind, and is intended to be the ground-work of all the operations of culture.

PART II. Treats of the Propagation and Management of Trees in the Nursery in detail, both Standards and Dwarfs, beginning with the Stocks and ending with taking up the Trees. The various kinds of Stocks, their particular Uses, &c., are all correctly described.

PART III. Treats of the Laying Out and Arrangements of different kinds of Orchards and Fruit Gardens, the selection of Trees and of varieties. Planting. Pruning. and Training of Standards, Dwarf, Pyramids, and various other forms, in a manner calculated to furnish important information much sought for at this time.

PART IV. Contains Abridged Descriptions of all the best Fruits of well-established merit, with selections for various purposes and localities. and lists of new and promising varieties; also, a Chapter on Diseases and Insects; another on Gathering and Preserving Fruits. and one on the more important Implements used in Fruit Culture.

CHARLES SCRIBNER,
No. 36 Park Row, and 145 Nassau St., New York.
April, 1851.

Clover and Timothy Seed.

300 BUSHELS Clover; 250 bushes Timothy, warranted free from foul seeds. For sale at the Rochester Seed Store, No. 29 Buffalo street, by

April, 1851. J. P. FOGG & BROTHER.

Fruit and Ornamental Trees, &c.

THE subscribers solicit the attention of Nurserymen, Orchardists, and Amateurs, to their present large and fine Stock of Nursery articles.

Standard Fruit Trees, for Orchards, thrifty, well grown, and handsome, of all the best varieties.

Dwarf Trees, for Gardens, the largest Stock in the country and the most complete. Many thousand Pear Trees, of bearing age, can be furnished.

Cherry Currant—the largest variety known. Upwards of 1000 plants on hand.

English Gooseberries—2000 strong plants of the best sorts.

Large Fruited Monthly Raspberry, that gives a crop of fine fruit in the Autumn.

Strawberries—all the best sorts.

Ornamental Shade Trees, of good size for Streets, Parks, &c.—large and well grown.

Choice Trees and Shrubs for lawns and pleasure grounds, including all the finest, new, and rare articles recently introduced.

Hardy Evergreen Trees—Norway Spruce and Balsam Fir of small size in large quantities, and a moderate supply of large ones; besides nearly *Fifty New and Rare Evergreens*, including Deodars. Cedar of Lebanon, Chili Pine, Cryptomeria or Japan Cedar, Himalayan Spruce, &c., &c.

Roses, Paeonies, Phloxes, &c.—a large and complete collection, including the finest novelties.

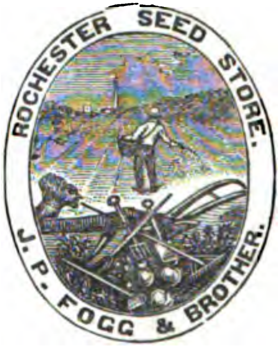
Dahlias—upwards of 100 select varieties, including the finest English prize flowers of 1849 and 1850.

Border Plants, for bedding out, such as Phloxes, Verbenas, Heliotropes, Salvias, Cupheas, Scarlet Geraniums, Plumbagos or Tecomas. &c., &c., can be supplied in quantities at very low prices.

The following Catalogues, giving full information as regards terms, prices, &c., will be sent gratis to all who apply by post-paid letters, or at the office

1st. A general descriptive Catalogue.
2d. A wholesale Catalogue, for those who purchase extensively.
3d. A Catalogue of select Green House Plants
4th. A special Catalogue of Dahlias and Bedding Plants, for 1851.

ELLWANGER & BARRY,
Mount Hope Garden and Nurseries.
Rochester. N. Y., April, 1851.


ROCHESTER SEED STORE.
J. P. FOGG & BROTHER.

ROCHESTER
SEED STORE
AND
Agricultural
WARE-HOUSE
REMOVED
FROM FRONT STREET TO
No. 29 Buffalo Street,
OPPOSITE THE
ARCADE.
A LARGE VARIETY OF
SEEDS.
FARMING TOOLS
OF EVERY
DESCRIPTION

April, 1851. J. P. FOGG & BROTHER.

California Flower, Shrub and Tree Seeds.

THE subscribers have just received from the hands of the collector nearly 50 varieties of the above, all fresh and in good condition. No other country in the world, with a temperate climate, presents such an array of floral beauties as do the western slopes of the Nevada Hills, where the present collection was made, and it is believed, that as regards novelty and beauty, no previous selection has exceeded the one now offered.

The Seeds are put up in neat small packages of 47 varieties, price $2.50 each, with descriptive catalogues, and can be sent to any part of the United States or Europe, by mail if desired.

J. M. THORBURN & CO.
April, 1851. 15 John Street, New York.

THE GENESEE FARMER,

VOLUME XII, FOR 1851.

Fifty Cents a Year, in Advance.

FIVE Copies for $2; Eight Copies for $3, and any larger number at the same rate.

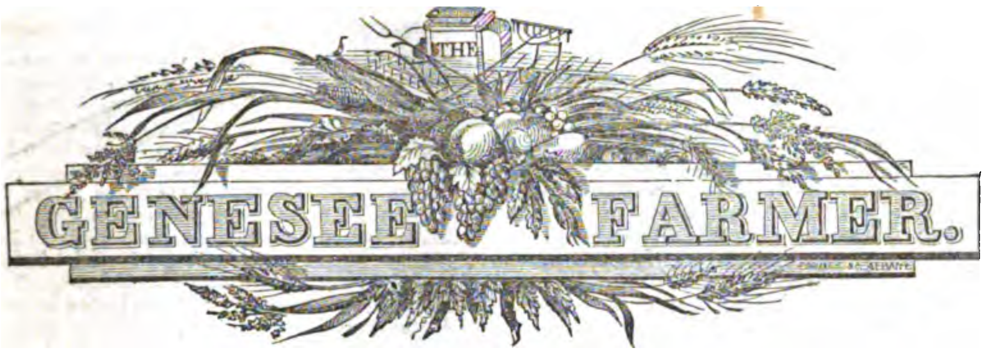
☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ POST-MASTERS, AGENTS, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post-paid or free,) at the risk of the Publisher. Address to

DANIEL LEE,
December, 1850. *Rochester. New York*

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.



Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—MAY, 1851. NO. 5.

THE PROGRESS OF AGRICULTURAL KNOWLEDGE DURING THE LAST EIGHT YEARS.

The above is the title of an extended and valuable essay by P. H. Pusry, M. P., editor of the Journal of the Royal Agricultural Society, which appears in the last volume of that excellent work. The eight years immediately preceding the commencement of the last half of the 19th century, will long be remembered for the new impulse given to agricultural improvements in the most civilized and best-informed nations of Europe and America. It is within the period named, that farmers in England, and in this country have fairly comprehended the fact that agriculture is a science more varied and comprehensive than almost any other in the whole range of human knowledge. The successful study of its numerous phenomena and practical truths, is the work of a lifetime. Hitherto very little progress has been made in any country from the want of cordial co-operation for the advancement of knowledge between practical and scientific men. Mr. Pusey thus alludes to the labors of Baron Liebig; "That eminent philosopher prepared and sold under a patent, manure containing the mineral ingredients so prepared as to be slowly soluble, and therefore to supply to wheat what was wanted, when it was wanted. Ammonia was omitted, it was thought it would be supplied by the air. The scientific manure was applied, but the wheat did not mend." The mineral theory then eagerly adopted was contained in the following axiom of Lirbig:—"The crops in a field diminish or increase in exact proportion to the diminution or increase of the *mineral* subsances conveyed to them in manure."

This doctrine received its death-blow from Mr. Lawes' experiments at Rothamstead, in the following manner:—Plants, it is well known, consist chiefly of oxygen, hydrogen, nitrogen, and carbon; the gas first named forming water by uniting with the second, air with the third, and carbonic acid with the fourth. These invisible gaseous bodies form what are called the *organic* elements of plants. But when burnt, they all yield an incombustible ash, which is called the *inorganic*, or *mineral* part of vegetables. Baron Likbig's theory was that the supply of this earthy part of plants removed in crops was all that the farmer need trouble himself about. To test this chemical suggestion, Mr. Lawes tried sundry experiments with the following results:—An unmanured field gave 16¾ bushels of wheat per acre.—One manured with 700 lbs. of superphosphate of lime, (similar to burnt bones) yielded the same quantity. Eight lots fertilized with various phosphates, also gave 16¾ bushels per acre. The ash of 14 tons of farm-yard manure gave but 16 bushels; while an equal quantity of manure gave 22. These four experiments demonstrated that on land devoid of mould or organic elements, fertilizers containing such elements are indispensable. Hence, Baron Liebig's theory that cereals can derive all their carbon and nitrogen from the atmosphere is proved to be incorrect. The subject, however, is far from being exhausted; for the question still remains to be decided how far carbon may be dispensed with in manure as in guano, and by what means ammonia or nitric acid can be most economically added to a soil in which one or both of these fertilizers are lacking. Ashes *alone*, whether of forest trees, crops, or good manure, will not suffice to give a fair yield of wheat on *exhausted* land. Upon land not exhausted, but abounding in rich soluble mould, the effect of wood ashes is very beneficial to wheat. When Mr. Lawes applied various salts to the amount of 619 lbs. to supply the mineral elements of a crop of wheat on exhausted land, without benefit, by the addition of 156 lbs. of rape seed cake, (nitrogenous matter,) the crop was increased from 16 to 22¾ bushels per acre. In another experiment, 646 lbs. of mineral salts aided by 80 of sulphate of ammonia, the crop was raised from 16 to 26¼ bushels. This result is the more noticeable from the fact, that no carbon, (coal,) was added to the soil in the manure; while the supply of nitrogen, sulphur, phosphorus, potash, magnesia, chlorine, &c., was abundant.

The scientific reader will not fail to weigh the fact that 80 lbs. of sulphate of ammonia increased a crop of wheat from 16 to 26¼ bushels, while 14 tons of barn-yard manure increased it only to 22 bushels. Mr. Lawes and Mr. Pusry ascribe this remarkable gain to the available nitrogen in the ammonia; but we think that the *sulphur* in the fertilizer contributed to the result. Mr. Pusey says "upon these experiments rests the now established doctrine that nitrogen is what white crops require. And it may generally be assumed for practical purposes, that if ammonia be supplied to wheat, it will find the mineral ingredients for itself, either in the soil or in past or present dressings." This is doubtless true, especially on highly manured land in England.

Mr. Lawes' experiments on turnips are more complicated, and as the culture of this renovating crop is little practiced in this country, we shall pass on to the next topic under review. Suffice it to say that carbonaceous manures, like the solid excrements of animals, and phosphates, do better for turnips, comparatively speaking, than ammonia, which operates so favorably on wheat. Mr. PUSEY says: "I am inclined to suspect that carbon has a much more active principle than we suppose, even in small quantities." The fertilizing power of oil is ascribed to this element; as is also that of pulverized bituminous coal. Water charged with carbonic acid has been found very useful in nourishing plants. "At present," says Mr. P., "we can only say that the three leading principles of manure are—

1, AMMONIA;
2, PHOSPHORUS; and probably
3, CARBON."

To the above we should add sulphur and potash.

The author discusses the subject of ammonia, phosphorus, and carbon, at considerable length, and gives due credit to BARON LIEBIG for being the first to suggest the use of sulphuric acid to dissolve bones for agricultural purposes. In this country the cost of this acid (oil of vitriol) is such as to forbid its general use. It is cheaper to boil bones to powder in lye, than to buy acid to dissolve them. If all the ammonia wasted in cities were saved, it would add immensely to the grain crops of the United States.

The power of gypsum to "fix" ammonia is discussed at length. Until it is dissoved it is valueless to form the involatile salt called sulphate of ammonia. Thus, the oil of vitriol, combined with lime to form gypsum, or plaster, can only leave the lime to unite chemically with ammonia, after the two salts, (carbonate of ammonia, and sulphate of lime,) are brought together in solution. Then the carbonic acid leaves the ammonia, and combines with the lime; while the sulphuric acid leaves the lime, and unites with the ammonia. This is what is called double decomposition. Dr. SPRENGEL recommends green vitriol (copperas or sulphate of iron) to fix ammonia in urine tanks; but its price is a serious objection.

By the important discovery of Mr. THOMPSON, substantiated by the experiments of Professor WAY, farmers in England are now using dry clay to deodorize manure, by absorbing all its gases. Mr. HUXTABLE found that putrid urine and offensive sewer water, in passing through seven or eight inches of loam, became pure as well as clear. Thus a deep loam is able to retain the manure committed to it, until the future crop requires nourishment. It is the present practice with the best English farmers to cover with the plow manure about four inches deep; and twelve inches of mellow soil should lie under it to retain all its fertilizing elements. *Loam* alone retains ammonia, *i. e.*, a mixture of clay and sand, for pure sand permits this volatile, and very soluble alkali, to escape readily.

In the matter of forming the fat, flesh, and milk of domestic animals, Mr. P. does full justice to the chemistry of physiology; at least so far as LIEBIG, BOUSSINGAULT, PLAYFAIR, and PAYEN are concerned. He has, however, overlooked the services of MULDER, whose profound researches we regard as second in importance to those of no other analyst in this department of chemical science. Our space is too limited for the discussion of physiology in this connection. At another time we will endeavor to give our readers some idea of the present condition of animal and vegetable chemistry in its bearings on rural affairs, On the subject of agricultural meteorology, an extract is made from Prof. DOVE's Chart, to illustrate by colored lines the variations of cold and heat on the surface of the earth, and how temperature is modified in England. Facts under this head can have but little interest out of the kingdom. If any of our readers desire to learn in which State of the Union the most water fell in 1850, we can inform them that Arkansas has the pre-eminence. In answer to letters by the proprietor of this journal from the Patent Office, many returns were received, and among others one from Arkansas stating that 85 inches of rain fell in the year 1850. We are collecting data on this interesting subject and in due time our readers shall have the benefit of the same.

This article is written on a *frosty* morning, in Rochester, on the 12th of April, after we have seen green peas in South Carolina and corn and figs much advanced in Georgia, this spring The protracted cold weather in northern States is a great drawback on the profits of agriculture; and we are more than ever impressed with the necessity of draining all wet fields and places to warm the soil. Mr. PUSEY has some valuable remarks on *draining*, the substance of which with some of our own, will appear in our next.

TOBACCO CULTURE.

THE world is so given to the mastication of tobacco, and to smoking and snuffing the vile weed, that its production is just now one of the most profitable crops grown in the United States. Young plants are started very much like those of cabbage in small beds; often by burning brush to form ashes and kill all insects where the seed is sown. Tobacco needs a rich soil to do well, and it is an exhausting crop. The American Farmer, published in Baltimore, in the heart of a tobacco-growing region, has given several valuable essays on this subject. We copy the following from that journal, which is written by Mr. W. J. BLACKINSTONE, a gentleman who has had much experience in the production of tobacco, and is commended by the Farmer as "one of the best planters in Maryland":

"The first thing necessary to the successful cultivation of tobacco is early plants. I shall therefore begin with the preparation of tobacco beds. I do not know how the subject can be better treated of by me, than by giving my own practical experience. I select a virgin soil with an exposure from the east, south, to west. It is raked clean, it is then burned over with brush or small wood, then hoed to the depth of 3 or 4 inches, until the whole is reduced to a fine tilth; it is then laid off in ridges 4 feet wide and raked with a fine rake, the space between the ridges being the width of the hoe, the surface of the ridges as nearly level as possible; the ridges should be north and south if the location will admit of it—I then apply one four ox load of most *recently raised stable manure to* 400 *square yards, upon the surface,* and seed one table-spoonful of seed to 100 *sq. yds.*, and then pat with the hoe. The manure is raised thus: The stables are swept clean of all seeds, and then littered *with wheat straw:* the horses' long food is wheat straw, their manger *food, corn.* It is kept free from rain, and sun, until used upon the bed, and then equally distributed over the surface with the hand. Care should be taken that no lumps should be left on the bed, so as to prevent the seed from reaching the earth. No other covering should be used, as the wheat straw in the manure is amply sufficient, and the best covering it can have. I then apply plaster at the rate of one bushel per acre, and when securly fenced in, either with a rail or hedge fence, the bed is completed. Brush should never be used as a covering, as it certainly from my knowledge gained by experience, retards the plants at least three weeks, and moreover renders them more liable to be destroyed by the fly, particularly when taken off. The straw should not be removed at all. It is no injury to the plants, on the contrary, a constant benefit. It keeps off the frost, and is a great protection against the fly. When the plants generally are up, I would top dress with drawn ashes,* hen manure, and plaster, mixed in the following proportions:—1 bushel drawn ashes, half a bushel of hen manure, 1 gallon of plaster, which will be sufficient for 400 sq. yds., to be repeated whenever washed off by the rain, unless the plants should indicate from their growth the absence of any necessity for further use. If the fly is bad, the mixture should be used whenever washed off, but always applied when the plants are dry—about noon is the best time. If a long drouth should come on, an occasional application of half the above compound, say twice a week, is the best preventive against its effects. Liquids should never be used except to promote the growth of plants in damp weather, and then are not necessary if the above mixture is used, as it will accelerate their growth as much as is desirable. I omitted to state as *indispensable*, that the bed should be *well drained, and kept at all times free from weeds and grass.* I have succeeded in raising plants in the mode above indicated for twelve years, without a failure. I work two farms, and one bed at each, the size being regulated according to the proposed crop, has been all that I have found it necessary to prepare within that time. No bed has been injured by the worm since I have adopted the above plan; before I have had them entirely destroyed when the plants were fit to set out, when the manure was incorporated with the soil. I would caution all who may adopt these suggestions, not to rake the bed after the manure is applied, as it will most certainly ruin it. Would any profit by the above, I would remind them that *personal attention is the best security against failure.*

"THE TIME AND MODE OF SOWING THE SEED.—The time must depend in a great measure upon the season; if wet, the bed can not be properly prepared. I have had good beds which were sown the 10th of January, and others as late as the 25th of March. The first good weather in February, say, (if it happen on,) the 20th, I would prefer, but as the weather is uncertain, the first opportunity that may offer between the middle of January and the last of March should be embraced, and that the time may not find us at fault, it would be well to have the brush or wood hauled in place, ready for use.

"I usually mix the seed with drawn ashes, a table spoonful, (the quantity for 100 sq. yds.) to a half gallon of ashes, and sow them with the hand, and that they may be as equally distributed as possible, make two sowings, one lengthwise, and the other crosswise the bed.

"The manner of protecting the young plants, as well from frost as from insects, I have indicated above in the application of stable manure with the wheat straw, upon the surface before seeding; it is an effectual protection against frost, and a great security against insects, and with the top dressing recommended above, to wit: 1 bushel of drawn ashes, ½ bushel hen manure, 1 gallon of plaster, mixed together, and put on 400 sq. yds. and repeated as often as circumstances may indicate, will prove as effectual a remedy against fly as can be devised. Soot added, would be an improvement perhaps, say 1 gallon.

"I have no doubt guano would be an excellent top dressing put on when the plants are dry, say at the rate of 100 lbs. to the acre, with plaster. I have never used it for that purpose, and therefore do not feel at liberty to do more than express an opinion of the probable good effects it might produce.

THE PERIOD AND METHOD OF SETTING OUT PLANTS.—Much depends upon the care and attention bestowed upon the bed as to the time when they will be fit to plant. I have usually had them fit to plant by the 15th of May, sometimes by the 1st of May, and then they require moist weather to transplant them, otherwise many would perish. The usual season for planting is from the 15th of May to the 1st of July; the first is considered early planting, the latter late planting, and in danger of an early frost.

The Method. They are drawn from the bed by the hand, and conveyed to the soil prepared for them, where they are transplanted one in each hill, a hole being made (by a planting stick, about 8 inches long, and 1½ inches in diameter) to receive the roots which are compressed by the hand with the surrounding earth. If planted in hills, about 5 or 6 thousand to the acre, if in drills, from 7 to 8 thousand, according to the views of the planter; the usual distance in hills is 30 inches, in drills about 20 inches, by 30 inches the wide way—I would prefer 36 inches. If it is desired to make large tobacco, planting in hills at 3 feet distance each way is best; if fine tobacco, closer planting must be resorted to, either in hills or drills. Much depends upon the locality, as to which is the best mode of planting—there are various opinions—I have planted both ways this year. I plant in hills, and I am satisfied with the crop, as it is as good as any I have seen;

"The soil best adapted to the growth of tobacco is a light bright brittle soil—newly cleared land produces the finest and best tobacco, but the quantity is usually less per acre, than upon land of similar texture well manured. Land intended for tobacco as for all other cultivated crops, should be freed from water by thorough draining. Wet land causes it to french, as we call it, and renders it unfit for use. The leaves present the appearance of being frozen, and cannot be restored by any efforts again to healthfulness. Lands gently undulating are best suited to its growth, as they wash off any excess of moisture so injurious to the plants. Of all the manures I have ever tried, stable manure is to be preferred; it causes a quick growth, which is very desirable, if not absolutely necessary to the production of a good article. The quantity of stable manure generally raised on a farm being insufficient to manure a large field, the mixture of virgin soil taken from the woods, headlands, and ditches, with the stable manure, would much increase the planter's available means of manuring his grounds, and amply compensate him for the labor expended. Ashes are a valuable and lasting manure, but in dry seasons apt to fire the tobacco, unless plaster is used, which keeps it green and makes it coarse."

(To be continued.)

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* "Drawn ashes" are leached ashes.

HOW TO MAKE VINEGAR.

We have several requests for information in making vinegar. We copy the following from the volume of the Genesee Farmer for 1846:

"Many people find it difficult to make good vinegar. When we moved to Wheatland, we found two barrels partly full of old cider standing in the sun, in the hope, on the part of the owner, that the cider would become acetic acid. A few grapes, and we believe some yeast, had been put into the barrels, but still the transformation would not take place. By the following process good vinegar was made in two or three days, and with closer attention might have been made in 36 hours:

One barrel was set up on end, the hoops started and the upper head taken out. The cider had been taken out below the middle of the barrel, so that the bung could be open to admit the air. Several small sticks were set on end in the barrel, on the upper extremeties of which pieces of shingle rested just above the surface of the cider. On these strips of shingle was placed a quantity of clean pine shavings, which happened to be at hand. With these the barrel was loosely filled. A pailful or two of the cider was drawn by tapping the barrel near the lower head, and warmed to blood heat, and made to trickle down over the whole surface of the shavings into the cider below. After this, sufficient heat was generated by the active chemical action, or acetous fermentation that followed, to keep the shavings at 98°, or thereabouts. So soon as the cider began to turn sour, a part of it was made to trickle dow a piece of old carpet like an untwisted rope, into the bung-hole of the other barrel of cider. This barrel was tapped, and the cider drawn and poured over the shavings, and also converted into good vinegar.

The *rationale* of making alcohol into acetic acid is this:

The alcohol found in cider, wine, beer, fermented milk, whiskey, &c., is made of elements contained in sugar and starch, which are elaborated by living plants in their fruit, like apples and grapes; and in seeds, as in corn, rye and barley. Starch and sugar are composed of elements precisely alike in character and quantity, viz: 12 parts of carbon, 10 of oxygen, and 10 of hydrogen. Before alcohol is formed of these elements, they combine with 2 atoms more of oxygen and hydorgen, and make *grape sugar.*—The formula of which is, 12 carbon, 12 oxygen, and 12 hydrogen. The formula of alcohol is 4 carbon, 6 hydrogen, and 2 oxygen. To make *two* atoms of alcohol will require 8 carbon, 12 hydrogen, and 4 oxygen. As *one* atom of grape sugar has 12 carbon, 12 hydrogen, and 12 oxygen, it is obvious that 8 parts of oxygen and 4 of carbon will be left from an atom of grape sugar after 2 atoms of alcohol have been formed. Now in making an atom of carbonic acid, oxygen combines with carbon in the ratio of 2 parts of oxygen to 1 of carbon, or 8 of O. to 4 of C. Hence we see *why* it is that in all vinous fermentation, whether in the domestic brewing of small beer, raising bread, or in making ale or whiskey in large establishments, fixed air, or carbonic acid gas, is generated.

To understand the transformation of alcohol in cider, beer, whiskey, or brandy, into vinegar, the unlearned reader will note the following facts: The composition of alcohol is 4 carbon, 6 hydrogen, and 2 oxygen. That of pure vinegar—anhydrous acetic acid—is 4 carbon, 6 hydrogen, and 3 oxygen. Water is composed of an atom of oxygen united with an atom of hydrogen, although the atom of oxygen is 8 times heavier than that of hydrogen. If 4 atoms of oxygen (which exists in the atmosphere) combine with 1 of alcohol, the composition of the latter will stand 4 C., 6 H., and 6 O.* Three atoms of the oxygen thus derived from the air unite with 3 atoms of the hydrogen in alcohol to form 3 atoms of water, which leaves 4 carbon, 3 hydrogen, and 3 oxygen, or an atom of pure vinegar, *diluted* in 3 atoms of water.

We omit to state the process of forming what chemists term *aldehyd*, intermediate between alcohol and acetic acid, as unimportant to the practical farmer. Practically, it is seen that to convert alcohol into vinegar, we have only to *oxidize* the alcohol.—This is done by exposing alcohol to the chemical action of the atmosphere, by spreading it over an immense surface of thin coiled up shavings for a short time. Warmth favors the chemical change. But when cider is confined from the air in a tight barrel, except with an open bung hole, and perhaps the neck of an inverted bottle in that, it may take three or four months to change it into vinegar. Every body knows that a high heat is generated when alcohol is burnt in a spirit lamp. This is owing to the formation of water by the chemical union of oxygen in the air with the 6 parts of hydrogen in 1 of alcohol. For the same reason heat is evolved in the shavings in a cider barrel when the alcohol in cider is transformed into acetic acid."

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*C. stands for carbon. H. for hydrogen. and O. for oxygen.

EXPERIENCE IN THE USE OF PLASTER.

Messrs. Editors:—I send you my short experience in the use of plaster and clover. I purchased my farm in June, 1847, it being what is called hard run. Being engaged in other business, I let it out to the neighbors, to be cropped. The ground that I had sowed with wheat was broken up in June, and cross plowed before sowing, and put in well. The next spring, (1848,) I sowed clover, four quarts to the acre. When the clover came up, I sowed plaster, 30 lbs. to the acre. The wheat was gathered and threshed, and the yield was only 6½ bushels per acre, weighing 58 lbs. to the bushel. The clover grew up after harvest, and went to seed. I could have gathered, I think, at least two bushels of seed to the acre; but not having time to attend to it, I let it all rot on the ground. The next spring, 1849, I sowed it with plaster again, 30 lbs. to the acre. The clover grew up knee high. I plowed it down in June, cross plowed it on the first day of September, and sowed on the twelfth. Last harvest (1850) the yield was 33½ bushels of wheat per acre, weighing 62 lbs. to the bushel. Before plowing, I pastured the clover enough to pay for the clover seed and plaster, and the sowing of the same: so it leaves me a gain, in favor of clover and plaster, of 27 bushels to the acre.

This may not be called an experiment. It is true 1850 was a better year for wheat than 1848, where the land was in good condition; but where it was poor, the wheat dried up before it filled. A neighbor, not forty miles from here, had a piece of land in about as good condition as mine was in 1847. It yielded (taking his own words for it) 30 bushels on 5½ acres—not quite six bushels to the acre, and a poor article at that. After this, no one need say that he is too poor to buy clover seed and plaster. C. W.—*Brimfield, O.*, 1851.

Condensed Correspondence.

Such a mass of matter has accumulated on our hands of late, mostly communications from practical farmers, that we are compelled to condense them or leave the greater part unpublished. Some of these it is necessary that we should give the present month, to be of any advantage the present season. We have, therefore, concluded to give a few pages in a condensed form, retaining, however, all the material statements.

PROPER TIME FOR FELLING TIMBER, &c.

Messrs. Editors:—Having for the past two years been a reader of your valuable paper, I consider myself under obligations to its Editors and Contributors for the pains taken to please, as well as to instruct its patrons in the various departments of our useful occupation. And, notwithstanding much ability and practical knowledge are displayed by most of its contributors, it is to be expected that all of them have something yet to learn, and are liable to be mistaken in what they feel well assured they perfectly understand.

In perusing the pages of the Farmer, I sometimes find what is not in accordance with my views; and, as truth is frequently elicited by comparing discordant opinions, and weighing assigned reasons, I have concluded, as briefly as possible, to notice a few subjects upon which I, or some others, want a little more light; and, perhaps, ask a few questions, and impart my mite of information, for the benefit of our great fraternity; provided, of course, the editors think my contribution worthy the room it would occupy.

First, I would advert to an extract from a letter on the proper time of felling timber, and the editorial remarks thereon, on page 11, of the current volume. If there is so great a difference in the durability of timber, cut in different seasons of the year, as the writer feels confident of, certainly it is a matter of importance to us to know it, and to know when is the right time; neither would we object to knowing the reasons therefor, as it might be well worth while to put by some of our ordinary business, urgent as it is, at the season proposed by the writer, if thereby we might save half the expense of fencing our farms.

When I was a boy, some thirty years ago, I was taught to cut bushes, for the purpose of killing them, just after they had completed their annual growth; the reason assigned was, the roots were exhausted by furnishing the material for their growth, and the sap that was necessary to enable them to withstand the effects of winter, was not returned to them but was still in the trunks and branches. Our late friend and devotee of agricultural improvement, Jesse Buel, wise as he was, entertained a theory as absurd as the above, that is, that the sap is in the alburnum or sap-wood in summer, and in the heart-wood in winter. Now provided the presence of sap, without reference to its condition, be the cause of the speedy decay of timber, then, of course, it would be best, if the sap occupies the roots in winter and the trunk and branches in summer, to cut timber of all kinds, and for all purposes, in the former season; but if the sap fills alternately the pores of the heart and sap-wood, then cut in summer, especially large timber, which is mostly heart-wood. But both of the above notions are, in my opinion, but notions, and without any foundation in truth. I concur in the remark of the editor, that "the proportion of sap or water in a green tree, varies but little in different seasons of the year, as compared with its dry matter." The condition of the sap at the time of felling timber, must then, in my opinion, be looked to as affecting its durability; and the relative strength of sticks that have been cut at different times, I would attribute to another cause than that of their cells being stored with starch and albumen. If timber is cut before the insoluble starch and albumen are, by the vital energies of the tree, converted into soluble sugar, gum, &c., the sap or water is evaporated, and no fermentation effected; but if the tree is felled when its pores are filled with a solution of sugar, dextrine, and gum, as soon as the vital action is suspended, a play of chemical affinities commences, and a rapid decomposition, not only of the substances held in solution, but partially of the woody fibres of the alburnum, is effected, and a consequent weakening of its cohesive property. But after all, is the evil so great as is imagined? Undoubtedly it is in a sapling of suitable size for a lever. But the question I propose for solution is, whether the heartwood is at all affected by the condition of the sap? whether there is any circulation of sap going on in its pores? whether vitality in it is not extinct, and it serves only as a support to the wonderfully organized structure and vital operations by which it is enveloped, waiting the summons of the woodman's axe to appropriate it to his use at any season that may best suit his convenience.

On page 40 of the same volume of the Farmer, I notice a communication from a person who, it seems to me, is not quite so competent to answer the enquiries of those who ask for information on the best mode of destroying, or restricting to prescribed limits, that pest of our farms, the Snapdragon, (*Linaria Antirrhinum*) as though he had been better acquainted with its habits, for, from his observations, we would infer that he has once passed through a district infested with it, and has cultivated it in a flower border, but not long enough to know that it is a perrennial instead of an annual. We, who have been fighting it some twenty years, with the vain hope of its final extermination, do not feel disposed to set our brother farmers to digging with a hoe, but I would recommend the use of salt, where it appears in isolated patches; and would all the farmers in a neighborhood not much infested with it, unite in a war of extermination, it might be kept from spreading, except by its gradual encroachment from districts already overrun; but our farmers are not all careful, and if it is suffered to take quiet possession of one farm, the owners of those adjoining may nearly as well give up, for the light seeds are driven by the winds on the crusted snow from field to field, and every root broken by the plow is sure to produce a progeny of tiny plants, in which case the farmers only alternative is, to manure well and smother it with a luxurious growth of grass or grain. In hoed crops it is not to be dreaded, neither does it flourish in good meadows, or fields well cultivated with grain, but in poor pastures it seems to find a congenial home, and grass and weeds of every class yield it undisputed possession; but even then, a good coat of manure, and plowing and seeding with a liberal hand will prove effectual. This may seem like giving up to an enemy too easily, but from long observation and experience, I am persuaded that it would be time and labor thrown away to try to destroy snapdragon by digging, after it had spread to any considerable extent.

I will not at this time comment upon any other subject, but as the season for gardening is approaching, I will communicate a little item of information, that may be of service to some who are fond of Lima Beans, but find it difficult to grow them. I have found the most difficulty in their coming up, and the reason is obvious enough too, when once thought of; they are so large and flat, that when thrown down in the usual way they fall on the side, and when swollen by the moisture, their circumference is so much increased that the stem has not sufficient strength to raise or displace the superincumbent earth, consequently it curls around in the soil and finally dies. My Limas, planted in the usual way, never half came up, but stick them in carefully with the heart, or point whence the root issues, downwards, and all that are good will come up.

And lastly, although it is not the season for gathering pears, yet while I am writing and think of it, I would like to be informed of the best mode of saving winter pears, as I completely failed last winter by wrapping some separately in paper, and keeping them in a dry room. My pears were the *St. Germain*. The trees were procured from A. J. Downing, but are identical, both tree and fruit, with the *Colmar d' Hiver*, from New Bedford, Mass. Are the two varieties nearly alike? My pears withered and were utterly worthless. S. H.—*Plattskill, N. Y.*

NATURAL AND CULTIVATED GRASSES.

A Young Farmer, of Wolcot, N. Y., in the December number of the Farmer, asks your advice about manuring—whether to plow it in deep or lay it on the surface. He then goes on to speak of wild June grass as of something inferior to artificial grasses. This I think entirely a mistake. I am sure I am much within the limits that truth would permit me to take, when I say that 75 per cent of all the English butter that supplies the London market, is made from natural grass in the summer and from hay of the same material in winter. Now, I apprehend that about Christmas the Londoners would be very much puzzled to say on which side their bread was buttered, if English hay, made of natural grass, was as worthless for butter making purposes, as timothy hay is known to be. It must be borne in mind, too, that slopping and feeding grain to milking cows, is a practice unknown to butter makers there, and that there is nearly as much butter made in the winter as in the summer. I will just add, in corroboration of the opinion of the writer's father, that many English agriculturists believe that grass land, if generally pastured, will go on to improve for half a century.

While you are at the World's Fair, go down to the vale of Aylesbury. There you may see several thousand acres of the richest grass land in the world, that has been undisturbed by the plow since the days of the Tudors, and much of it does not show the slightest trace of ever having been cultivated; and, though called a vale, the land is as rolling as much of Western New York. I am clearly of the opinion that there is a great many acres of land in this country, that would, if it had been cleared off without plowing and left for permanent pasturage, at this day have been much more valuable than it now is or can be for many years to come. J. G.—*Wayne, Steub. Co., N. Y.*

We certainly think our correspondent mistaken when he says that "seventy-five per cent. of all the English butter that supplies the London market is made from natural grass." This may be true of butter from certain sections. Rye-grass, orchard-grass, or cocksfoot, and other varieties of grass are cultivated extensively, as well as clover. Vetches, or tares, lucern, sanfoin, &c., are raised in almost all parts of the country for soiling. Hay, in England, is cured with much care and labor, and placed in very neat stacks, from which it is cut, by a knife, in square "trusses," weighing about fifty-six pounds. We never noticed that English hay was superior in any way to American. We rather think the butter is more indebted to the care of the dairy maid for its good quality, than to any virtues in the hay or grass. Although good butter is always to be found in England, by paying the highest price, yet the traveller will have no difficulty in finding that which is inferior at a cheaper rate.

The propriety of laying down lands to *permanent pastures* has been much discussed in England, and this course is more generally adopted, but in Scotland very little land which is capable of being brought under the plow is kept in permanent grass. But, in England those *permanent meadows* are not left unmanured and uncared for, as our correspondent would lead us to suppose. We have seen farmers in England manuring their meadows with liquid manure from a cart such as is used in watering the streets of our cities. In other cases meadows in England receive a thorough top-dressing of well-rotted manure. The scarifier, or harrow, is then used, scratching the surface, and permitting the manure to penetrate to the roots. After the scarifier, we have seen large bunches of thorns and brambles drawn across the field, to aid in incorporating the manure with the soil. No wonder that land in grass, thus treated, constantly improves. Statements of the practice of English agriculturists, unless very explicit, are apt to mislead.

DISEASES OF CATTLE.

Horn Distemper.—Farmers are generally aware of the fact that cattle once attacked with the horn distemper are subject to similar attacks every succeeding winter or spring. I have found by experience, that a dose of soot and salt given occasionally, with a little spirits of turpentine between the horns, will prevent an attack.

Black Leg.—Many calves are lost every year by this disease. It is generally believed to be caused by change of feed in the spring. I have kept a large number of calves for several winters past, and have never had one affected by this disease. I raise a large quantity of roots, (principally sugar beet) and feed them during the winter to my young stock The change in the spring is not so great as though they had been kept on dry feed during the winter, and I think calves fed partly on roots during the winter will not be troubled with black leg.

Many of our cows have been attacked with a disease soon after calving. For a short time they appear well, but soon are taken with an inflammatory disease, (I suppose,) and most thus attacked die, unless helped speedily. The best remedy we have found, is a table-spoonful of saltpetre, dissolved in a pint of whiskey. This remedy is quite successful. R. D.

POTATO CULTURE.

Eds. Genesee Farmer:—Many years since I discovered that new potatoes invariably set above the tubers or seed planted, and in accordance with my knowledge of this fact, I commenced planting the potatoes as deep in the ground as I ever designed they should be at any time during the season of cultivation. The practice has thus far fully answered my expectations. I have for the past ten years invariably raised very good crops of fair sized potatoes, while many of my neighbors, tilling the same kind of soil, who have pursued the old method of hilling and tillage, have had lighter yields and smaller and inferior potatoes. I have found that the seasons of severe drouth have not as seriously affected my crops as those of others. I prepare the land for potatoes the same as for corn. I plant in hills three feet apart, and usually with a spade dig as deep as the ground has been plowed, and, if a sod, I cut through it. The tops are longer in coming out of the ground, but as soon as out, I pass through the rows with a cultivator, and with a hoe clean the hills. When hoed, I put the same composition in the hills that I use for corn, which greatly benefits the crop. I endeavor to keep the ground clean during the season. I have usually planted about the first of May, and dug and housed as soon as they were sufficiently ripe, and therefore have lost but few by the rot. I doubt not that if farmers would, where their soil admits, practice the level mode of culture, both with corn and potatoes, that they would generally be much better repaid for their labor. But enough upon this subject.

Now a word about Sowing Plaster. The use of it is rapidly increasing in the country, and consequently the best method of sowing should be adopted. It may not be known by all of the readers of the Farmer who use it, that sowing from a wagon is the quickest, easiest, cheapest and best method, where sown by hand. Place the barrel, or barrels, in a wagon, taking out a head. A man will sow it about as fast as horses usually walk, if he has a person to drive. By this means a ton can be very accurately sown in a few hours without much fatigue or suffering from the dust. **Orange H. Wait.**—*Willoughby, Ohio.*

FOOT-ROT IN SHEEP.

Messrs. Editors:—The following is an infallible cure for Foot-Rot in Sheep, if faithfully applied, and the sheep put into pasture that is not infested with the disease. Make 1 gall. of strong tobacco water by boiling 1 lb. of good tobacco, skim out the tobacco leaves, and while hot, add 1 lb. of blue vitriol, ½ lb. of copperas, and ½ lb. alum—if partly pulverized it will dissolve the better. After it is cold, add half a pint of spirits of turpentine.

To work to advantage, it needs two men. One catches the sheep, sets it on its rump between his feet, with the back of the head up against his breast. Seating himself on a low bench, with a sharp knife he clears the hoofs of the fore feet, paring off all the loose hoof, and applies the medicine with a small brush that will work between the claws, as it must be applied thoroughly between them, and on the outside to the top of the hoof. The other is seated so as to conveniently attend to the hind feet. Thus two men will doctor from fifty to one hundred sheep in a day, which must be done three times a week. It is no doubt highly contagious after it is once seated. If one is lame, the whole flock must be doctored. It is allowed by many experienced shepherds that the disease is often produced by neglecting to clean and trim the feet in the spring when warm weather first commences, in March or April, the shell of the hoof growing down below the sole of the foot and turning under, where dirt accumulates, and also between the claws, creating a fever and generating the loathsome disease, which, when it once gets into a flock, is hard to remove, being so contagious, and yet in a single sheep it is easily cured. See "American Shepherd," by L. A. M., page 380. **A Shepherd of Steuben.**—*Reading, N. Y.*

"CALF FEVER."

Some time since I noticed an article in the Farmer, from a correspondent, asking for information upon what he called the "calf fever." I was in hopes that some one competent to the task, would take the matter up and give us some light upon the subject. But as that is not the case, I will offer my opinion. The "calf fever," I think, is the same complaint that in England is emphatically called the "fall," from the fact, I presume, that in ninety-nine cases out of every hundred, an animal so falling never rises again; our only hope, therefore, is in warding off the attack, for cure is almost impossible. It is entirely independent, I believe, of any previous course of feeding, except, however, that those cows that are in the highest condition will be most liable to attack, but is brought on by exposing the cow to the burning rays of the sun immediately after having calved. I am the more confirmed in this opinion from the fact that although I have known many cases, have never known one to occur in cold or cloudy weather, and it is more common in the early part of the season than later in the summer, when the animal frame has become more inured to the heat. If the weather is hot let your cows be kept in the shade (if they are shut up, the place should be well ventilated,) for at least two or three days after calving. I imagined I relieved a cow that showed strong symptoms of this complaint, by sprinkling her copiously with cold water from the head to the tail. If your correspondent is in possession of any facts that conflict with this view of the case, I hope he will publish them. J. G.—*Wayne, Steub. Co., N. Y.*

RAISING CATTLE.

In the spring of 1848 I planted fifty rods of ground to carrots, from which I obtained 280 bushels. The September following I purchased ten calves, for which I paid 5c. per lb. per head. The ensuing winter I fed them three pecks once a day, one small ear of corn, and what hay and corn fodder they could make way with; I gave them good pasture through the summer. The next winter I fed them with two quarts of corn-cob meal per day, together with other fodder. They had good pasture through the past summer. On the 11th December last, I weighed them and they averaged 1224 lbs. each, the largest weighing 1320 lbs.

Upon close calculation, I think a man had better raise cattle in this way than the common way—of not feeding any grain—for the average weight of steers that are one year older, would not be more than 1100 lbs., take the country through, and we have a fine stock-growing country in old Jefferson. E. Gore.—*Bellville, N. Y.*

Remedy for Botts.—Those who have horses troubled with Botts, will find the following a very good remedy:—Take half a pint of molasses and one pint of new milk, which put in a bottle and shake well together—drench with this. Then dissolve a quarter pound of allum in warm water, and in fifteen minutes give this. Physic should be given after this. P. C.

Inquiries and Answers.

Messrs. Editors:—In the October number of the Farmer, for 1850, you published a communication signed Joseph Harris, in which the writer endeavored to show that plowing in clover is an actual damage to the wheat crop, and I was not a little surprised when "S. W." endorsed the theory in the succeeding number. Now, if I have understood the editor of the Farmer, he has heretofore recommended the plowing in of green clover, and taught the same, as the very best mode of general practice. Indeed, in the same number you gave an account of an uncommon yield of wheat, (sixty bushels to the acre,) said to be raised on poor land manured with lime and ashes and a fine growth of *clover* turned under, so I think the editor has not given up his old theory, but the wonder is how such a statement as the one referred to, came to be inserted without note or comment. It seems to me to be a mistake which will *tell* against the acknowledged merits of the Genesee Farmer. Farmers who have successfully pursued the course of plowing in clover and summer fallowing for wheat, (both of which you lately seem to discourage) will not be easily induced to change it for an opposite course. I have universally observed that where this course has been followed, it has been more successful than any other. Without disrespect to Mr. Harris, who says he is an English farmer, recently arrived in this country, I would advise that he test the matter a little more fully before prejudging and condemning the almost universal experience of others, whose chances to know are probably as good as his. Who does not know that the wheat crop of Western New York would be very much reduced—probably one-half—if the valuable aid of plowing in clover was dispensed with, yet foreigners settling in this country generally affect a superior knowledge of everything American that is not precisely like the same thing in the old country. In regard to this, only two things surprises me; one is that they should leave so good a country as the one they emigrated from; the other is, that they should settle in a worse one, or in one where they are so ignorant as they are in the United States of America. They scarcely wait till they strike our shores ere they endeavor to teach their exploded dogmas.

I should like to hear some of S. W.'s reasons for believing "the system still persisted in (plowing in clover) is attended with the steadily increased dimunition of crops." Such is the very reverse of my own experience, and if any plausible reasons can be given for such speculations, I should like to see them put forth in the Farmer, or some other agricultural print.

I noticed in your paper of January last, a communication concerning horse-rakes, and would ask you if the rakes then recommended are the best in use. If so, they are far from being perfect. The wire-tooth rake is too weak for heavy grass, and good only for gleaning, while the wooden turnover rake is absolutely too provoking for a christian to use, if he would avoid profane language. They are hard to hold and awkward to turn over; they also tangle up the hay, so that you must lift the whole rake full, with a fork, at once, or spend some time in pulling it apart. If you have any other kinds, please give us engravings of them, and their prices now as well as any time, so that we can know what we want and where to get it. Give engravings of all kinds. Also, if it would not be out of place, give us an engraving of Mr. Streeter's barn you praised so highly in your August number, with a description of the same. Anti-Humbug.

The writer of the above shows more feeling than the topics discussed call for; but we will let that matter pass. It is our practice to permit farmers to express their views on all questions like the plowing in of clover, or feeding it to domestic animals and turning under the manure made from it, instead of the plants, with the utmost freedom in the pages of this journal. There are soils so rich in vegetable mould, that the dung and urine derived from a ton of any forage plants, are better for a crop of wheat than the plants without passing through the bodies of animals. We have so often explained the philosophy of this, that we supposed every reader of the Farmer understood our views upon the subject. No one proposes to grow clover or grass and wholly remove the crop with the expectation of *improving* the land thereby. The only debateable point is that of feeding grass or hay and turning under the manure, or turning under the plants without feeding. In a majority of cases, the soil is so poor that the latter is the better treatment for the land. In our "Study of Soils"—a work now in press—this interesting topic is discussed at length.

Eds. Gen. Farmer.—Although a stranger to you personally, yet as those whose attention is directed, in no small degree, to agricultural pursuits, perhaps "mutual favors will beget mutual benefits." Living at some distance from market, I have been convinced for a long time that a small capital can be better invested than in raising wheat and corn. Accordingly, among others, I have had my attention directed to the cultivation of Mustard and Flax seed. So far as I am able to inform myself, I have become satisfied that a mustard crop, where it hits, is profitable, and perhaps more so than any that can be raised. But how to make it hit is the difficulty. On turning to the Prairie Farmer for information on this subject, the editor very clearly intimates two things:—first, that if you succeed in raising a crop you will not find a market for it; secondly, that the crop (based upon past experience) will prove a failure. On recurring to other works, and particularly to the Patent Office Report of 1848, I find the same discouragements held out. After giving the cases of those who had tried to raise this crop, without success, it concludes by saying that, with one exception, no person could be found who had attempted to raise a second crop, and that the person who made a second attempt, wound up his experiment by assigning over his property for the benefit of his creditors. Now after all this, we do know of one individual who has been uniformly successful in raising this crop; but as to the secret of his success, if there be any, the public are inaccessible. Will you, then, do the writer of this the favor to answer the following interrogatories:

What kind of seed should be used, and how much to the acre?

When should the seed be put into the ground, and how many bushels may be considered an ordinary yield?

And, generally, how should the crop be cultivated; or, in other words, what are the causes why so many fail in their attempt to raise it?

In relation to the raising of Flax, our enquiries will be entirely confined to the cultivation of it simply for the seed. It is said there are three kinds of seed, and that one kind will yield much more seed than either the others. If this be the case, will you describe this seed so that it may be known. Again, at what time in the year should it be sown, and how much seed should be sown to the acre? On this latter point there seems to be a variety of opinion. The Patent Office Report referred to above varies the quantity from half to one and a quarter bushels to the acre. The Complete Farmer says that six pecks is the least, and two bushels the most that should be sown. The Prairie Farmer lays it down at one bushel to the acre. The Valley Farmer, in an article on this subject, affirms that from fifteen to twenty quarts is enough; while a writer in the St. Louis Intelligencer of a late date, says that six to eight quarts is amply sufficient. From these various statements, you will see that in sowing say thirty acres, the matter of seed alone becomes a question of some importance, especially when good seed is worth from $1,65 to $1,75 per bushel, and it becomes doubly so when from the sowing of six quarts to the acre, according to the writer in the Intelligencer, a person may expect as an ordinary crop, eighteen bushels to the acre, and from that to twenty-four. This writer signs himself an "Eastern Man," and professes to give his experience as such, with that of others within his knowledge.

Now, Messrs. Editors, living, as we do, some distance from any market, having at least one hundred miles of land carriage, you will see that the more capital we can get into the bushel, other things being equal, the better. Any information in answer to this, will be fully appreciated by one subscriber at least. H. D. J.—*Eddyville, Ia., March*, 1851.

One must have choice land and a favorable season, to realize from eighteen to twenty-four bushels of flax seed per acre from a field of thirty acres. Practical men differ in opinion as much about flax culture, as on any other subject. To obtain a large crop of seed, the soil should be finely cultivated and rich, and care should be taken not to sow too much seed per acre. We have many readers of experience in the production of this crop, and we should like to learn from some of them the quantity of seed which they use.

The demand for mustard is too limited for the general culture of this plant, if it paid well as a field crop.

* * *

Messrs. Editors:—Will you have the goodness to inform me whether old chip manure is well adapted to a garden of stony, gravelly soil. I do not sufficiently understand the chemical analysis of the manure—the soil to which it is to be applied—the vegetables to be grown in the soil—to decide. But I am seeking for the requisite knowledge on these points, through your very careful journal, and other sources, hoping I may soon be able to determine such questions for myself. But for this time if you would give some general views in relation to this point, you would do me a favor and perhaps your readers generally. Inquirer.

"Chip manure" is better adapted to a heavy, clay soil than to one which is light, or "stony and gravelly." By mixing leached ashes with decaying chips, their fertilizing power, for any soil, will be greatly improved. They are also admirably adapted to the wants of trees, as a mulching, covering the entire area of the roots of the tree. Chip manure is light and porous, and may be advantageously mixed with the solid and liquid droppings of animals.

* * *

Eds. Gen. Farmer:—Please publish information relative to the different kinds of mills for cleaning clover seed—hand-mill, horse-power, and water- power—and the cost of each. Wm. S. Flack.—*Essex, N. Y., Feb.*, 1851.

There have been several improvements in machines for cleaning clover seed, since the Editor of this journal was familiar with the operation. Perhaps some one now engaged in the business of growing clover seed will give the desired information. We believe E. J. **Burrall**, of Geneva, manufactures a good mill.

Messrs. Editors:—If it will not tax your time too much, I should be glad to have an answer from you to one or two questions which I am unable to answer for myself, and that you may answer understandingly, I will transcribe an analysis of our soil and subsoil, made for us by Dr. Salisbury. It is as follows. 100 parts of dry soil give of

	Surface soil.	Sub-soil.
Humine and Humic acid,	0.746	3.300
Apocrenic acid,	0.146	
Crenic acid,	0.056	
Undecomposed or insoluble vegetable matter,	5,802	
Silica,	82.691	84.310
Alumnia and Iron,	7.842	8.560
Lime,	0.569	0.590
Phosphoric acid,	0.053	0.056
Magnesia,	0.437	0.920
Potash,	0.853	0.949
Soda,	0.343	0.530
Chlorine,	0.160	0.170
Sulphuric acid,	0.261	0.280
	99.970	99.766

Now, what I wish to know is this: would the following rotation, accompanied by the soiling system, be a beneficial one or not?—that is, would the soil probably grow better or worse under it? The rotation is as follows:

1st year. Manure on green crops, as turnips, potatoes, and corn, drilled for fodder, &c.

2d year. Spring grain, seeded with clover.

3d year. Clover cut for hay and feeding, then turned over in the fall and sowed with wheat.

4th year. Wheat, seeded with clover.

5th year. Clover, cut and turned under in the fall, and sowed with wheat.

6th year. Wheat.

7th year. Manure again, say twenty loads to the acre.

An answer to the above, through your valuable paper, or otherwise, as most convenient, will much oblige A Reader.—*Lockport, N. Y., March*. 1851.

Our correspondent has a soil which is better than an average in Western New York, although it contains only a half per cent of lime, or thereabouts. If we understand him, he proposes to seed with wheat four falls in succession, viz. 3d, 4th, 5th and 6th, in his system of rotation. This is too much of one white crop, unless he applies ashes, salt, lime, and stable manure to keep up and augment the fruitfulness of his arated land. There are few soils which can bear over one crop of wheat (a good one) in three years, and as a general rule, one in four years will be better in the long run. Green crops made into manure, and that restored to the fields whence the crops were taken, should be more practiced, if farmers wish to improve their estates. This, with under-draining and deep-tillage, will change the whole face of our country for the better. Rear choice neat stock on grass and other forage plants, and the business will be profitable.

* * *

Messrs. Editors:—I have purchased a lot of hair from the tanners, for the purpose of applying it to my land. If convenient, I would be pleased to be advised how and when the hair ought to be applied to the soil for the benefit of the summer crop. I propose applying at the rate of twenty bushels per acre. Elida John.—*Pleasant Dale, Pa., March*, 1851.

Cover the hair with a plow, to decompose in the soil just below the roots of your crops; and be careful to spread it evenly in the rows, or broadcast, as you may think best to apply it. Hair is a powerful fertilizer when it rots.

* * *

Eds. Gen. Farmer:—Will you do me the favor to inform me, at your earliest convenience, whether Distillery Manure is good for raising vegetables and grain. Any information you may be pleased to give me will be thankfully received. I do not recollect seeing anything in your paper respecting it.—John G. Kilby.—*Waterford, N. Y., Feb.*, 1851.

Distillery manure being formed of the seeds of grain, either corn, rye, or barley, is valuable for all vegetables. It is usually diluted with a good deal of water, but this does not change the nature of any of its fertilizing elements.

MESSRS. EDITORS :—There is one point in agricultural books and periodicals, which, to my mind, has never been treated satisfactorily ; I mean the theory and usefulness of turning in crops for manure. If, as is said even by Prof. JOHNSTON himself, in some of his writings, the philosophy of the operation consists in the absorption of organic and inorganic elements from the subsoil by the roots to be plowed in, and so enriching the surface, there would be at all events in the long run, no addition of fertility, unless all plants intended for green-manuring had roots able to penetrate deeper than those of the cereals, and other plants to follow, which does not appear to me to be the case. The whole advantage, then, might consist in the mellowing of the soil, which a naked fallow might do as well.

If the absorption of gases from the atmosphere, by the leaves of the plants, constitutes the enriching addition, then let it be more confidently stated, and let some discrimination be made, having in view that position between the plants intended for that use. Either of the above suppositions being established, is the result found in practice to warrant the outlay, considering the price of labor and of produce in America?

Some words of comment on the above, will oblige

A SUBSCRIBER.

Our correspondent alludes to points of the highest practical importance. We rejoice to see so many readers of this journal waking up and pushing their investigations beyond the mere surface of things and theories. The ascent and descent of the soluble elements of crops, both organic and mineral, through the soil and around the roots of plants, is an interesting study. Not less curious and instructive is the increase and decrease of vegetable mould in cultivated land. We have two hundred closely written pages of manuscript on the "Study of Soils," and more than eight hundred on "Agricultural Geology," embodying all that the books have to show, in the way of *facts*, on these subjects. But we are all small school-children in this matter, and after three winters of hard labor at Albany, and two winters and one summer at Washington, the writer is constrained to say that, unless the farmers instruct their public servants to lend a little aid to Agricultural Science, it can never *begin* to make progress in this country.

ANALYSIS OF MARL, AND ITS VALUE AS A MANURE.

ANALYTICAL LABORATORY, YALE COLLEGE,
New Haven, Conn., April, 1851.

EDS. GENESEE FARMER :—During a visit to your part of the State of New York, in the months of September and October last, I was greatly impressed by the remarkable amount of mineral and vegetable wealth that lies locked up in your swamps and hollows, in the form of Muck and Marl. These invaluable deposits were so frequent, so abundant in the quantity of their fertilizing materials, and withal, so little valued, as to awaken my astonishment. I am aware that this lack of appreciation of these riches, is not for want of means of information, for your valuable paper has frequently endeavored to arouse the farmers upon this very subject. I have thought, however, that a few words from a stranger might possibly produce some effect ; and that the analysis of one of your own marls, which has been made in my laboratory during the past winter, might possess a degree of interest to the practical farmer, beyond that of any mere abstract argument.

The marl alluded to, was from a drained swamp that I visited in the town of Clyde, Wayne county. The field belonged to Mr. JOS. WATSON, then President of the County Agricultural Society, an active, intelligent and enterprising farmer, one who is laboring, both by example and by precept, to elevate the character of Agriculture in Wayne county.

The analysis of this marl was carefully performed by one my students, Mr. JON. B. BUNCE, of Hartford, Ct., and his results are given in the following table :

Composition of 100 lbs. of Marl.

	Clyde.	Peterboro, N. Y.
Sand,	.090	9.57
Lime,	50.565	45.02
Carbonic Acid,	38.519	35.00
Magnesia,	.072	0.66
Iron and Alumnia, with some Phosphoric Acid,	.061	2.69
Common Salt,	trace	——
Sulphuric Acid,	trace	——
Organic Matter,	10.693	7.06
	100.000	100.00

This marl, according to the above statement, is one of an uncommonly fine character. Adding together the lime and carbonic acid, we find that in 100 lbs. of the dry marl, there is 89.084 lbs. of carbonate of lime, or nearly nine-tenths of the whole. Indeed, if we leave out the organic matter, this marl is almost an absolutely pure carbonate of lime. The small quantity of carbonate of magnesia adds somewhat to its value, and the phosphoric acid, although in an extremely minute proportion, is of much importance. If there is but one pound in a thousand, it will amount to something worth mentioning when we add a number of tons of the marl per acre. The mere traces of sulphuric acid, and of salt, are also, in this vein, of considerable importance.

By way of comparison, I add the analysis of a marl from Peterboro, N. Y., also made in my laboratory. This is a marl of good quality, but does not equal the first sample, which is one of the purest that I have ever seen.

Any person who has studied even the rudiments of Scientific Agriculture, must say at once, on looking at these analyses, that the substances named are such as enter into the composition of plants, and are, in fact, indispensable to their growth. The experience of all European, and many American practical farmers, confirms, by actual results, this theoretical view. Why then is it that your farmers, as a class, do not make any use of that species of manure which has thus been deposited for their benefit at their very doors? It is not because their land is fertile enough already, for a journey through even your most thriving districts, will prove amply that this is not the case. There are hundreds of fields in your richest counties, gardens as these naturally are in soil and climate, that look unmistakably poverty stricken, that cry out, as plainly as man could do, for food.

If the present generation of farmers do not make use of the treasures which nature has so abundantly provided, the next will be obliged to do so, for they will find the land exhausted, and will be forced to study the best means of bringing it up again. But if the farmer can be induced to take the right course now, to employ every variety of fertilizers wherever the produce of the soil begins to fail, they will never have to go through with the long experience and toilsome process of restoration. Once run down, it is hard to bring land up ; but a fertile soil may be kept so, and even be made to improve, with a comparatively small amount of labor.

You have farms and farmers in your section of the state that are alike creditable to American agriculture; such need little urging. But there are others who have scarcely made any advance ; and others still, who are even retrograding. To each of these latter classes, I should say that a dose of marl and muck would be of essential service.

JOHN P. NORTON

NEW YORK STATE AGRICULTURAL SOCIETY.

LIST OF PREMIUMS FOR THE ANNUAL SHOW, TO BE HELD AT ROCHESTER, SEPT., 16, 17, 18, & 19, 1851.

(*Continued from page 85.*)

POULTRY.

Best lot of Dorkings not less than 3, 1 cock and 2 hens. $3. Best lot of Polands, do do, 3. Best lot of Malay or Chittagong fowls. 3 Best lot of Bantams, do do. 3. Best lot of Game, do do. 3. Best lot of Turkeys, not less than three, 3. Best lot of Muscovy Ducks. do. 3. Best lot of Small Ducks, do. 3. Best lot of Guinea Hens, not less than six, 3. Best pair of Large Geese, 3. Best pair of Wild Geese, 3. Best lot of poultry owned by exhibitor. (statement to be furnished and verified,) 10. Best exhibition of Pigeons, 3. Best lot of wild Turkeys, 3.

PLOWS.

Best plow with newly invented principles or arrangements, not heretofore known, which on trial proves beneficial to the farmer, $15

PLOWING MATCH.

First premium. $10; 2d do. 8; 3d do, 5; 4th do, Trans. *Boys under* 18 *years of age*—First premium, 10; 2d do, 5; 3d do, Trans.

The competition for plowing open to competitors out of the State. The name of plowman must be given as well as the kind of plow used, at the time of entry.

Rules to be observed—depth of furrow 7 inches, width 10 inches, lap furrow.

FARM IMPLEMENTS NO. I.

Best farm wagon, $5. Best harrow, 3 Best corn cultivator. 3. Best fanning mill, 5. Best corn stalk cutter, 5. Best straw cutter, 3. Best corn and cob crusher by, horse power, 5. Best clover machine, 5 Best flax and hemp dresser. 5. Best horse cart for farm 3. Best ox cart, 3. Best horse rake. 2. Best ox yoke, 2. Best roller for general use, 5. Best clod crusher and roller combined, 5.

FARM IMPLEMENTS NO. II.

Best plow harness, $2. Best wagon harness for farm, 2. Best carriage harness, 3. Best saddle and harness for general purposes. 2. Best dozen axes. 2. Best churn, 2. Best cheese press. 2. Best six milk pans. 2. Best potato washer, 2. Best grain cradle, 2. Best six hand rakes, 2. Best six hay forks, 2. Best six grass scythes, 2. Best six cradle scythes, 2. Best six manure forks. 2. Best hay rigging. 2. Best lot of grain measures, 2 Best dozen wire brooms, 3; 2d do. 2. Best dozen Shaker, or twine-tied brooms, 3; 2d do, 2. Sample of each kind of brooms to which premiums are awarded, to be deposited in Museum.

FARM IMPLEMENTS NO. III.

Best horse power for general purposes on the sweep or lever principle, $5 and Dip. Best horse power on railroad or endless chain principle, 5 and Dip. Best iron horse power, 5 and Dip. Best thresher, to be used with horse or steam power, 5 and Dip. Best seed planter, for hand or horse power, for hills or drills, 3 and Dip. Best wheat drill, not less than six drills, Dip. Best grain drill, with apparatus for depositing manure, Dip. Best cultivator and drill combined, Dip. Best broad cast sower, Dip. Best wheat cultivator, Dip. Best portable sawmill, for wood, fences, and for farm use, Dip. Best corn sheller, horse power, Dip. Best corn sheller, hand power, Dip. Best vegetable cutter, Dip. Best and most numerous collection of agricultural implements. $20 and Dip. Best and most numerous collection of agricultural implements, manufactured in the State of New York, by or under the supervision of the exhibitor, materials, workmanship, utility, durability, and prices, to be considered in both cases, $20 and Dip.

In these last cases, a catalogue of the implements, and the price of each, must be given, and certificate as to the manufacture.

P. S.—Persons presenting agricultural implements or articles of mechanical ingenuity and utility, are requested to furnish the Secretary with a particular description of the article, the price, and place where it can be had—as it is intended to publish a descriptive list of the articles exhibited at the Show, for the benefit of manufacturers and purchasers.

MACHINERY AND IMPLEMENTS NO. IV.

For the most valuable machine or implement for the farmer, either newly invented or an improvement on any one in use, Silver Medal.

STEAM ENGINE FOR FARM PURPOSES.—Best steam engine for agricultural purposes on the farm—being moveable—which, from its utility in saving labor and expense, simplicity and cheapness of construction, or other circumstances, shall be deemed worthy of public notice. The report must be accompanied by drawings and descriptions of the machine and by a model—the model or machine to be deposited in Society's Museum, Sil. Med. and $25; 2d do. $20.

Silver Medals will also be awarded for articles of mechanical ingenuity, and machinery deemed useful.

BUTTER.

Best lot (quality as well as quantity considered) made from five cows in 30 consecutive days, 25 lbs of the butter to be exhibited. $25; 2d do, 15; 3d do. 10.

Compliance with the following rules will be strictly required of those who compete for these premiums, viz:—The cows to be fed on pasture, green corn stalk fodder, or grass cut for the purpose only. No grain, roots, or slops of any description, to be fed during the trial. The cows to be owned by the competitors previous to the first day of February, 1851. The milk to be drawn from the cows on some day during the trial to be accurately weighed and measured, and the result stated. A sample of at least 25 pounds of the butter so made to be exhibited at the Show for the inspection of the examining committee. The particular breed of cows to be stated, if known, and the method of making and preserving the butter. A certificate signed by the owners of the cows, and at least one other person who assisted in milking and making the butter, detailing the above particulars, will be required.

Let the above regulations be observed, and an opinion approximating to accuracy may be formed by the public, which of the several breeds of cows are the best for dairy purposes; and from those that prove the best, further improvements may be made.

Best 25 lbs. of butter made in June, $10; 2d do. 5; 3d do, Trans. Best 50 lbs. made any time, 15; 2d do, 10; 3d do. 5; 4th do, Trans. Best half dozen butter firkins, 2. Best half dozen butter tubs, 2.

The claimants for premiums must state in writing when the butter was made; the number of cows kept on the farm; the mode of keeping; the treatment of the cream and milk before churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substance has been employed; also whether in the use of any variety of salt injurious results have occurred; if so, state variety and where manufactured.

The butter offered for premiums must be presented in butter tubs, jars, or firkins.

Girls under 21 *years of age*—Best lot of butter, not less than 10 lbs., made at any time, Silver Milk Cup; 2d do. Pair Butter Knives; 3d do. Set Tea Spoons.

A statement of the manner of making the butter must accompany each sample.

CHEESE.

One year old and over—Best 100 lbs, $20; 2d do. 10; 3d do, 5; 4th do, Trans. *Less than one year old*—Best 100 lbs., 15; 2d do, 10; 3d do. 5; 4th do, Trans. Best half dozen cheese boxes, 1. Best six dairies (not less than three cheeses from each) from any county, 30. Best three dairies, (not less than three cheeses from each.) from any town, 15.

Those who present cheese for the premiums offered, must state in writing the time it was made; the number of cows kept; whether the cheese was made from one, two, or more milkings; whether any addition is made of cream; the quantity of rennet used, and the mode of preparing it; the mode of pressure; and the treatment of cheese afterwards, and the kind of salt used.

SUGAR.

Best 25 lbs. maple sugar, $10; 2d do, 5; 3d do, 3; 4th do. Trans.

The process of manufacturing and clarifying must accompany the samples offered.

HONEY.

Best 20 lbs, $5; 2d do, 3; 3d do. 2.

GRAIN AND SEEDS.

Best sample winter wheat, not less than one bbl. $5; 2d do, 3. Best sample of spring wheat, 1 bbl, 5; 2d do, 3. Best sample of rye, 1 bbl, 5; 2d do, 3. Best sample of oats, 1 bbl. 5; 2d do, 3. Best sample of barley, 1 bbl, 5; 2d do, 3. Best sample of Indian corn, 1 bbl, 5; 2d do 3. Best sample of buckwheat, 1 bushel, 3; 2d do, 2. Best sample of flax seed, 1 bushel, 3; 2d do, 2. Best sample of hops, not less than 25 lbs, 5; 2d do, 3. Best sample of timothy seed, 1 bushel, 3; 2d do. 2. Best sample of newly introduced grain, valuable to the farmer, not less than 1 bbl, 3.

Samples of grain and seed in all cases to be deposited in the Museum of the Society.

Sample of crops cultivated and raised on any *one* farm, tastefully arranged and exhibited on a wagon or cart, $10; 2d do, 5; 3d do, Small Silver Medal.

The exhibitors to present a certificate to the committee, that all were raised on the exhibitor's own farm.

VEGETABLES.

12 best stalks of celery. $3. 6 best heads of cauliflower. 3 6 best heads of brocoli, 3. 12 best white table turnips, 3. 12 best carrots, 3. 12 best beets, 3. 12 best parsnips, 3. 12 best onions. 3. 6 best heads of cabbage, 3. 12 best tomatoes, 3 2 best purple egg plants, 3. Best half peck Lima beans, 3. Best half peck Windsor beans, 3. Best bunch double parsley, 3. Three best squashes, 3. Largest pumpkin, 3. Twelve best ears of seed corn, 3. Best half peck of table potatoes, 3; 2d do. 2. Best and greatest variety of vegetables raised by exhibitor, 5; 2d do, 3. 12 best sweet potatoes, 3. Best new and valuable variety of vegetable, with evidence of its superiority, 3.

Discretionary premiums will be awarded on choice garden products not above enumerated.

FLOUR, INDIAN MEAL, STARCH, AND FARINA.

Best barrel flour, S. Sil. Med.; 2d do, Trans. Best barrel Indian meal prepared for warm climates, S. Sil. Med.; 2d do, Trans. Best sample starch from corn, S. Sil. Med. Best sample starch from wheat, S. Sil. Med. Best sample corn or wheat farina, S. Sil. Medal.

SILK AND DOMESTIC MANUFACTURES NO. I.

Best specimen manufactured silk, (woven into cloth or ribbons, not less than ten yards.) Dip. and $10; 2d do. 8; 3d do. 3.

REELED SILK.—Best specimen, not less than one pound, Dip. and $5; 2d do, 3; 3d do, Trans.

SEWING SILK.—Best specimen, Dip. and $5; 2d do, 3; 3d do, Tr.

COCOONS.—Best half bushel, (1851,) $5; 2d do, Trans.

Woolen Goods.—Best pair woolen blankets, $6; 2d do 4; 3d do. 2. Best ten yards flannel, 6; 2d do. 4; 3d do. 2. Best 10 yards woolen cloth, 10; 2d do, 8; 3d do. 3. Best 15 yards woolen carpet, 10; 2d do 8; 3d do, 6. Best hearth rug 5; 2d do, 4; 3d do 3; 4th do. 2; 5th do. S. Sil. Med Best rag carpet, 15 yards, 5; 2d do, 4; 3d do, S. Sil Med.

DOMESTIC MANUFACTURES NO. II.

Best double carpet coverlet, $5; 2d do. 4; 3d do, 3; 4th do, 2; 5th do. 1. Best ten yards kersey. 5; 2d do. 4; 3d do. 2. Best pair woolen knit stockings. 2; 2d do, 1. Best pair woolen wove stockings, 2; 2d do. 1. Best pair woolen fringe mittens, 2; 2d do, 1.

DOMESTIC MANUFACTURES NO. III.

Best 10 yards linen. $8; 2d do. 6; 3d do. 4. Best ten yards linen diaper. 6; 2d do. 4; 3d do. 2. Best 15 yards tow cloth. 5; 2d do. 2.

Best pair of cotton knit stockings, 2; 2d do, 1. Best pair cotton wove stockings. 2; 2d do. 1. Best pair linen knit stockings, 2; 2d do, 1. Best pair linen wove stockings, 2; 2d do, 1. Best pound linen sewing thread, 2: 2d do. 1.

Articles in each of these domestic classes to be manufactured within the year—and in all cases the exhibitors must furnish evidence that the articles are so manufactured. And no article manufactured in factories, or out of the family, will be received in either of the classes of domestic goods, No. 1. 2. and 3. Exhibitors must accompany their articles with a certificate of their manufacture in the family, and within the year

Discretionary premiums will be awarded on articles of merit not included in the above lists.

MANUFACTURES OTHER THAN DOMESTIC.

Best piece of black broadcloth, not less than 20 yards, Diploma. Best piece of blue do, Dip. Best piece of woolen carpet, manufactory, not less than 20 yards, Dip. Best piece of satinet. 20 yards, Dip. Best piece of cotton shirting, bleached, 20 yards. Dip. Best piece of cotton shirting, unbleached, 20 yards, Dip. Best piece of oil cloth, 10 yards. Dip. Best piece of prints, 20 yards. Dip Best piece of mousselin de laines, 20 yards, Dip. Best piece of black broadcloth, from American wool, 20 yards. Dip. Best piece of blue do do do, Dip. Best piece of blankets. Dip. Best piece of flannel. Dip. Best piece of woolen shawls, from American wool, Dip. and Sil. Medal.

Competition open to the world.

NEEDLE, SHELL, AND WAX WORK.

Best ornamental needle-work. $3. Best ottoman cover. 3. Best table cover, 3. Best group flowers, 3. Best variety of worsted work, 3. Best fancy chair work with needle, 3. Best worked cushion and back. 3. Best worked collar and handkerchief 3. Best woolen shawl, 3. Best worked quilts, 3. Best white quilts, 3. Best portfolios worked, 3. Best silk bonnets, 3. Best straw do, 3. Best lace capes, 3. Best lampstand mats, 3; 2d do. 2. Best ornamental shell work, 3; 2d do, 2; Best specimen of wax flowers, 3; 2d do. 2.

Discretionary premiums will be awarded for articles of merit not included in the above list; and small silver medals, to the number of twenty, may be awarded, and Transactions, Downing or Thomas on Fruits, and Norton's Prize Essay.

FLOWERS.

Professional List.—Greatest variety and quantity of flowers. $5; 2d do. 3. *Dahlias*—Greatest variety, 5. Best 24 dissimilar blooms, 3; 2d do. 2. Best single dahlia. 2. *Roses*—Greatest variety, 5. Best 24 dissimilar blooms, 3; 2d do. 2. *Phloxes*—Best ten varieties. 3. Best seedling. 2. *Verbenas*—Greatest variety. Silver Med. Best 12 varieties. 2. Best seedling, 2. *German Asters*—Best collection, Sil. Medal; 2d do, 2. *Pansies*—Best and greatest variety, 3. Best 24 varieties, 2.

Amateur List.—Greatest variety and quantity of flowers. Sil. Med.; 2d do. 3. *Dahlias*—Greatest variety, Sil. Med. Best 12 dissimilar blooms, 3. Best 6 varieties. 2. Best single variety, S. Sil. Med. *Roses*—Greatest variety, Sil. Med.; 2d do, 2. Best six dissimilar blooms. 3. *Phloxes*—Best six varieties, 3. Best three varieties, 2. Best seedling, 2. *Verbenas*—Greatest variety, Sil. Med. Best seedling. 2. Best six varieties. 3. Best 3 varieties, 2. *German Asters*—Best collection, S. Sil. Med. *Pansies*—Best and greatest variety. Sil. Med. Best six varieties, 2.

General List—*Open to all Competitors.*—Best collection of green house plants, owned by one person. Sil. Med.; 2d do, 3. Best floral design. Sil. Med.; 2d do. 3. Best floral ornament, Sil Med.; 2d do. 3. Best hand boquet, *flat*, 3; 2d do. 2. Best hand boquet, *round*, 3; 2d do. 2. Best basket boquet with handle, Sil. Med. For the most beautifully arranged basket of flowers, Sil. Med. Best floral exhibition by any Horticultural Society, Loudon's Encyclopedia of Gardening. Best exhibition of dried specimens of plants, Sil. Med. For newly discovered varieties of plants Sil. Med.

FRUIT.

Apples.—For the largest and best varieties of good table apples, 3 of each variety, named and labelled, grown by exhibitor. Dip. & Hovey's Colored Fruits; 2d do, 5; 3d do, Trans For best twelve varieties of table apples. 5; 2d do, Trans and 2. For best fall seedling apple, for all purposes, with description of tree, history of its origin, &c., one dozen specimens to be exhibited, 5. Best basket of standard fruits, Sil. Med.

Pears.—For the largest number of varieties of good pears, named and labelled, Dip. and Hovey's Colored Fruits; 2d do, 5; 3d do, Trans. For the largest and best collection of autumn pears, named and labelled, Dip and 5; 2d do. Trans. and 2. Best collection of newly introduced pears, with a description, &c., Dip. & Hovey's Colored Fruits.

Peaches.—Best six varieties, named and labelled, Dip. and 5; 2d do. 3. Best three varieties, named and labelled, 3; 2d do. Tr. Best twelve peaches, 2; 2d do, Trans. Best seedling variety, six specimens, 3

Plums.—Best collection of plums, six specimens each variety, Dip and 5; 2d do. 3. Best 4 varieties of good plums, 6 specimens each, 3; 2d do, 2. Best 12 plums, choice variety. 2; 2d do, Trans.

Nectarines.—Best and largest number of good varieties, six specimens each, 5; 2d do, 2. Best 12 specimens of any good variety 2; 2d do. Trans.

Quinces.—Best 12 quinces of any variety, 3; 2d do. Trans.

Grapes.—Best and most extensive collection of good native grapes, grown in the open air, 5; 2d do. 2. Best 3 varieties of native or foreign grapes, grown under glass, three bunches each to be shown, 5; 2d do. 2. Best dish of native grapes, Trans.

Watermelons.—Best specimen of any variety. 3; 2d do, 2. Best collection of watermelons. 3.

Muskmelons.—Best specimens of any variety, 3; 2d do, 2. Best collection of muskmelons, 3.

Cranberries.—Best peck of domestic culture, 5; 2d do, 3.

To be accompanied with a full description of the manner of cultivation, nature of soil, &c.

Any premiums may be withheld, in the discretion of the committee, if the samples exhibited are not worthy of a premium.

The fruit exhibited for which premiums are awarded, to be at the disposal of the committee.

No person can receive but a single premium on the same fruit.

12 volumes of Downing, common edition, and 12 of Thomas' Fruit Culturist, will be awarded by the committee in their discretion, for choice fruits not enumerated.

FOREIGN FRUITS.

For best exhibition of each variety of fruit named in the above list, by persons out of the State, Sm. Sil. Med. and Trans.; 2d do, Downing or Thomas.

Volumes of Downing or Thomas will be awarded by the judges in their discretion, for choice fruits not enumerated.

PAINTINGS, DRAWINGS, ETC.

Best specimen of animal painting in oil, by American artist, Dip or Sil. Med. Do. do. in water colors, Dip. Best specimen of animal painting in oil, by foreign artist, Dip. Do. do. in water colors Dip. Best specimen of cattle drawing. Dip Best drawing of show grounds for Society, Dip. Best portrait of some animal of merit of an improved breed, (the painting to be the property of the Society, on approval by executive committee,) $25. Best specimen of paintings of fruit, Dip. Best daguerreotype of any domestic animal, Dip.

STOVES.

Cooking.—Best cooking stove for wood fire, Sil. Med.; 2d do. S. Sil. Med. Best cooking stove for coal, Sil. Med.; 2d do. S. S. Med. Best cooking range for families, Sil Med.; 2d do, S. S. Med.

Best furnace or other apparatus for warming houses, economy of construction and consumption of fuel, and security to premises to be taken into consideration, Sil. Med.

Best ornamental parlor stove, Sil. Med.; 2d do, S. S. Med. Best hall stove, Sil. Med.; 2d do, S. S. Med. Best sample of hollow ware, S. S. Med.

SILVER WARE, CUTLERY, AND BRITTANNIA WARE.

Best exhibition of silver ware, Sil. Med. Best exhibition of silver table cutlery, Sil. Med. Best exhibition of table cutlery, American manufacture, Sil. Med.; 2d do do, S. S Med. Best exhibition pocket cutlery, American manufacture. Sil. Med.; 2d do do, S. S. Med. Best specimen of silver ware with agricultural designs suitable for premiums. Sil. Med.; 2d do, S. S. Med. Best specimen of argentine and brittannia ware, Sil. Med.; 2d do, S. Sil. Med.

MISCELLANEOUS ARTICLES.

Best iron gate for farm purposes, Dip. Best ornamental cast iron vase on pedestal, Dip. Best water pipe, of water lime or other durable material other than iron or lead, Dip. Best sample drain tile, Dip. Best drain tile or pipe draining machine, Dip. and $10. Best quarter acre osier willow and the specimens of product manufactured. $5. Best wire hurdle fence, Dip. Best water ram or other hydraulic apparatus, Sil. Med. Best wire fence for farm purposes, with full description, cost of construction, and evidence of its adaptation to practical, beneficial, and economical uses, Sil. Medal.

DISCRETIONARY DEPARTMENT.

For improvements in machinery useful to the farmer, and having valuable properties, and not included under any head of any of the regular premiums, discretionary premiums will be awarded.

Under this general head, premiums will be awarded upon articles of ingenuity, usefulness, and merit, which may be exhibited, which are not provided for in the foregoing list of premiums; and they will be classed as follows:

No. 1. *Agricultural implements, or machinery for agricultural purposes not before named.*

No. 2. *Machinery of metal composition for general uses.*

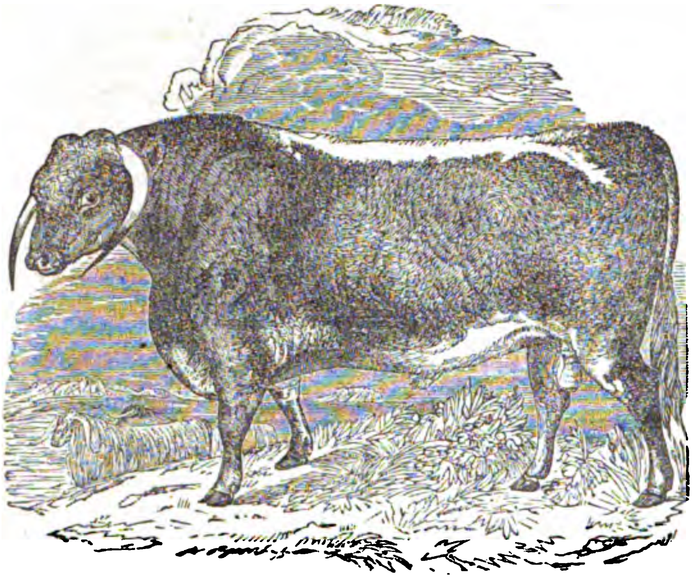
No. 3. *Articles constructed of wood.*

No. 4. *Articles manufactured of leather, India rubber, gutta percha, &c., and not before named.*

No. 5. *Articles composed of cloth, fur, &c, such as caps, hats, furs, umbrellas, &c., not before named.*

In these several Discretionary Divisions, Diplomas, Small Silver Medals, Norton's Prize Essay, Transactions, &c., will be awarded as the importance of the articles may demand. The Diploma is in all cases evidence of superior merit.

A NEW WORK ON CATTLE.



NEW LEICESTER LONG-HORN BULL.

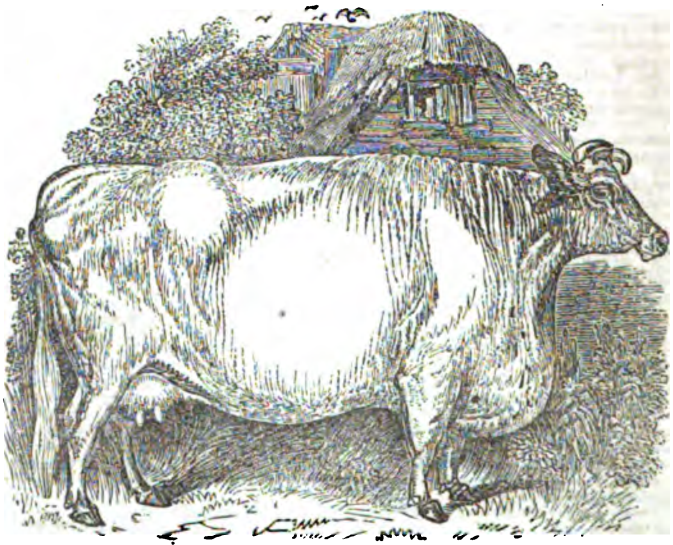
We have just received from C. M. Saxton, of New York, a book on cattle, of some 500 pages. It is edited by Ambrose Stevens, well known as an importer and breeder of stock, who has usually presented some of the best specimens at our State Fair. It is an abridgement of Youatt and Martin, English authors — but perhaps we could not better give a description of the work than by copying a portion of the editor's preface :

" In presenting an edition of Youatt to the American public, the American editor may justly say, that, of all the treatises on cattle, none is so valuable as his. Mr. Youatt was a man of rare ability ; a scholar, distinguished for the extent, variety, and elegance of his attainments ; for his power of research, historical and scientific ; for the brilliancy of his style ; and as a veterinary surgeon of profound knowledge, in both the science and practice of his art, and of devotion to its pursuit. Scarcely any man of all the world was so happily fitted as he, to produce a great historical and medical work on cattle.

" In preparing this treatise for publication, the American editor has abridged it of the history of local and inferior breeds of cattle in England, in which the American farmer and amateur has no interest. There is not a page in the whole but has been carefully considered, and, where it required, its matter advanced to the present state of knowledge on the subject. In doing this, many works on the subject, published since Mr. Youatt's, have been examined. The chief of these is, The Ox, by Mr. W. C. L. Martin, one of the officers of the London Zoological Society, a work never published in this country.

" The editor has consulted three recent German treatises on the diseases of cattle. The most valuable of these is by Gunther, who has applied homœopathy to animals. In addition to the ordinary modes of practice, the editor has given the treatment of Gunther. It is within his knowledge that the prescriptions of homœopathy have been eminently successful in the diseases of both horses and cattle. This method of managing their diseases will be valuable to those who adopt the school of Hahnemann, while it detracts nothing from the work as a manual of ordinary veterinary practice."

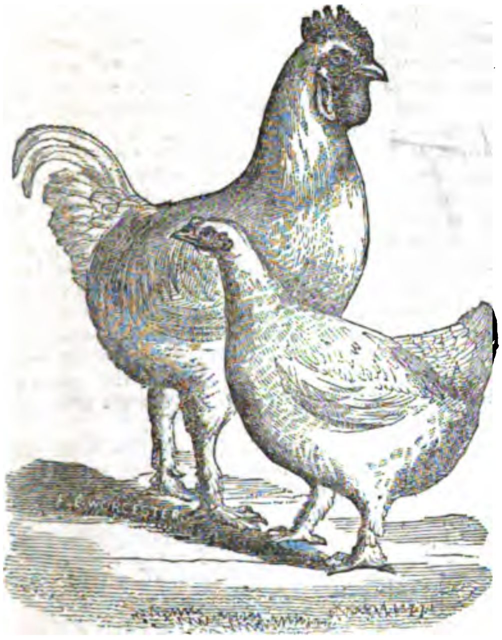
The work is fairly printed, and the character of the engravings may be seen by the specimens we give of long and short-horn cattle. We have not space this month for any description, or for further extracts from the work ; but those who want a good book on cattle, with descriptions of the various breeds in England and this country, can not do better than purchase this book, as it contains the information heretofore confined to expensive English works. — Those who have had no experience in the matter, know little of the high cost of English books, as compared with American. We have often paid from five to ten dollars for an English work that if published in this country would sell at from one to two dollars. The present work sells at $1.25, and after the new post-office law takes effect, can be sent by mail to all parts of the country. For sale at our office, and we presume by booksellers generally.



THE REV. H. BERRY'S SHORT-HORN COW.

POULTRY.

WE have received from the publishers, E. H. BUTLER & Co., of Philadelphia, a new work on Poultry, by Dr. KERR, of Philadelphia, or rather a re-print of DIXON's English work, with additions by the American editor, and his numerous correspondents, who are among the most extensive and best informed poultry breeders of the country. Mr. EBEN WIGHT, of Dedham, Mass., has also presented us with specimens of his *White Shanghae* fowls. Mr. W. furnished a description and portraits of these fowls for KERR's new work, which we copy for the benefit of our readers:



DR. EBEN WIGHT'S WHITE SHANGHAE FOWLS.

"Among the many varieties of the Gallus race which have been introduced into the New England States from China, there is no variety which possesses so many good qualities as the White Shanghaes.

"The White Shanghaes are larger and more quiet than other varieties. The flesh of these fowls is much superior, not sinewy or "stringy," as is the case with the flesh of most of the other Shanghaes. The eggs are larger, and these hens are more prolific than those of other colors.

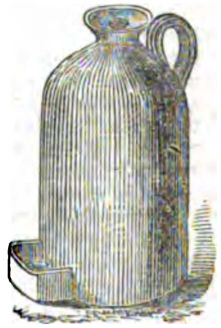
"In their habits they are more quiet, and less inclined to ramble. These habits render the hens invaluable for incubators and nurses, and the mildness of their disposition makes them excellent foster-mothers, as they never injure the chicks belonging to other hens. I am induced to speak more fully of these characteristics, from the many vexatious losses I have suffered in the experiments I have tried.

"I have imported different breeds of fowls from Europe and elsewhere, and have received from many friends specimens of choice fowls, and my endeavors to propagate them have been frustrated by the rambling or quarrelsome disposition of the hens which I have been obliged to use for incubators and nurses. I have lost, oftentimes, by quarrelsomeness of the hens, their entire broods; for instance, the Game hens are constant sitters and careful nurses to their own chickens, but are exceedingly cruel to those of other hens. The moment one of their chickens is injured, a fight is commenced, and the chickens, alarmed at the turmoil, crowding around their dams, are many of them killed, and the victorious hen, after her opponent has retreated, will attack every chick within her reach, and oftentimes, in her desire for revenge, mistaking her own chicks as belonging to her antagonist, destroys them. In the mean time the vanquished will destroy every stranger's chick that comes within her reach.

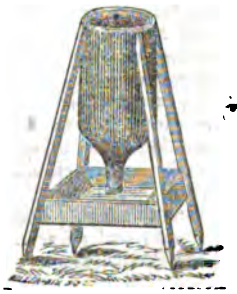
"Having, as I before stated, met with many vexatious losses, I, as you must readily conceive, do most highly prize the White Shanghae fowls for their quiet dispositions. These fowls are not sluggish or stupid; on the contrary, they are intelligent and confiding. To persons who have the "everlasting layers," the Black Spanish, for instance,—a breed that never shows the slightest desire to incubate,—the White Shanghaes are invaluable for the purpose of rearing chickens.

"The fowls of which the artist made the drawing from which the portraits are engraved, were imported from Shanghae, and were there purchased as a pure race, and were warranted as such. I received them directly from the ship, and as evidence of the purity of blood, I mention that every egg that has been laid has incubated, and every chick that has been hatched has been uniformly white, and there has not been the slightest variation in form or plumage.

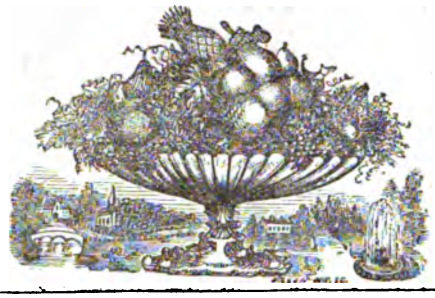
"These fowls will rank among the largest coming from China, and, as a proof that they thrive well in this climate, I will instance that one of the progeny, a cock, not yet eight months old, being one of the first brood hatched, weighs fully eight pounds, and the pullets are proportionably large."



We have to thank Capt. DAKIN, of Geneva, the gentlemanly navigator of Seneca Lake, for a Poultry Fountain, just come safe to hand, and of which we have had an engraving made, for the benefit of those who keep poultry. It is simply a common earthen jar, with a little basin in front, and a small hole in the jar, through which the water passes to the basin. This hole must be closed while filling the jar, which is then corked tight and the plug at the bottom removed. The basin is thus filled from the jar and kept full. This is the most convenient arrangement for watering fowls that we ever noticed.



For those who are unable to procure the above, we present a drawing of another on the same principle, which we have used—simple, and easily constructed. An ordinary junk bottle forms a reservoir; the trough below contains very little water, and is never overflowed. Pointed lath, nailed to the sides and stuck into the ground, keep the whole upright.



Horticultural Department.

EDITED BY P. BARRY.

A GOSSIP ABOUT WINTER, SPRING, &c.

In our region the winter has been comparatively mild, nothing seems to have suffered from cold, and at the present moment there is a fine prospect for a fruit crop. Early in the winter, before the ground was frozen, we had an extraordinary fall of snow—in 48 hours it fell to the depth of two or three feet, and in many places accumulated in heavy drifts, doing serious injury to young trees—more indeed than we have seen done in the ten previous years, all put together. The ground being warm below, it thawed and settled rapidly, carrying down branches and whole trees with it. Many beautiful garden trees of several years careful nursing have been ruined. This is one of the draw-backs upon cultivators; but we are not to be discouraged by it in the least. The like may not occur again in ten years, nor perhaps in our lifetime. We must train up new branches and new trees to take the place of those destroyed.

The life of a cultivator is not, after all, so easy—so free from cares and disappointments. If his magazines are not laid in ashes by a sweeping conflagration, nor his ships buried beneath the angry waves of the ocean, nor his wares depreciated by a fall of stock, bankruptcies, or revolutions, his hopes are not unfrequently blasted by blight, by hail, by drouth, and by snow storms. He has enough in his own way to prevent him forgetting his weakness and his dependence upon a higher power. These little adversities are good for us; they not only humble us, which is a great point, but they awaken us to increased energy—they stir up our inventive faculties, and lead to discoveries that ultimately prove of great value. The pear blight, for example, has directed people's attention to the investigation of vegetable physiology more effectually than if a thousand men had been engaged to lecture upon the subject through the country for years. The destruction of insects, the effects of dry and wet seasons, of frosts, snows, &c., all elicit experiment and research, that in the end promote the general good; so that these disappointments, sad and sickening though they sometimes be, are perhaps always "blessings in disguise."

Spring has opened with us unusually early. The deep covering of snow excluded frost; and as soon as it disappeared, we were at once able to commence out-door operations. We commenced digging trees the first week in March, which is rather unusual in Western New York, and we have not been interrupted by rain or frost a whole day since. During the last week in March we had a few days of warm, May weather, that started the buds, and bade fair to give us a spring of remarkable earliness; but a sudden change came about, and we have had dry, cool, fine weather ever since, without any frost worth naming, and vegetation has remained where it was. Apricots on a south wall have been in blossom for ten days past, but no blossoms have yet expanded in the open ground. This shows the influence of a south exposure, and illustrates the impropriety of placing early blooming trees, like the apricot, in localities subject to late spring frosts, unless a proper protection be given.

In the flower garden, crocuses are passing out of bloom, spring colchicums, with their bright lilac flowers close to the ground, are in perfection, and hyacinths are begining to open. Pansies and daisies are quite gay; and the early phloxes, such as *elgans*, just opening—another day or two and they will be as brilliant as possible. For a mass of bright, early, spring flowers, this phlox elegans is really unsurpassed. It seems astonishing how these little delicate looking flowers can bear so well a temperature so steadily cold—but a degree or two above the freezing point continually, with frost at night.—In the woods, the scarlet maples, the poplars, willows, and elms are in full blossom, and present a strange contrast with the naked and lifeless looking branches of their neighbors. To some of our citizens who do not get abroad into the woods and fields, the blossoms of the maples, elms, and poplars, along the streets, are the first appearances of spring.

The markets are yet tolerably supplied with old vegetables, such as parsnips, cabbage, and such common things. A few apologies for lettuce and radishes have appeared, but nothing that we have seen fit for table. We think our markets ought now to warrant gardeners in forcing good things; we ought now to have *rhubarb*, *asparagus*, and *sea kale*, with abundance of *radishes*, *lettuce*, &c.

There appears to be no abatement of the tree planting spirit, but rather an increased activity in this as in gardening matters in general. Both in city and country the cultivation of fruit trees is becoming every year more and more attended to. Every conveyance that leaves our city, carries with it trees, and the importations of our nursery-men load train after train of cars on the railroads. Almost every person one meets is carrying trees, or is in some way busying himself about them, and on all sides and in various ways one can see indication of that general taste for planting that so happily is possessing people now-a-days.

We cannot now treat of the care required by new planted trees, but must refer to the May number of the last volume, which offers some suggestions on this point that are worthy of attention.

"The Secret of Vegetation."—In our account of the proceedings of the State Ag. Society at Albany, it will be remembered that a committee, of which A. J. Downing was a member, was appointed to investigate what purported to be the discovery of "the secret of vegetation," by a philosopher in Dutchess Co. Mr. Downing, in the April number of his journal, makes a most humourous and sarcastic report on the subject, in the form of a *dog story*—the best thing we have read in a great while, and exactly the way to treat such a nonsensical assumption. We trust the gentleman feels at ease now, over this wonderful discovery.

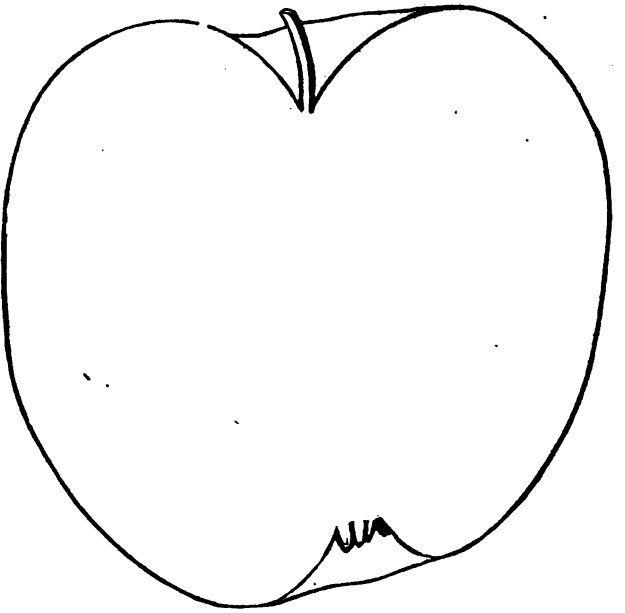
THE FLOWER GARDEN, OR BRECK'S BOOK OF FLOWERS; in which are described all the various Hardy Herbaceous Perennials, Shrubby Plants, and Evergreen Trees, desirable for ornamental purposes, with Directions for their Cultivation. By JOSEPH BRECK, Seedsman and Florist, and former Editor of the New England and Horticultural Register. Boston: JOHN P. JEWETT & Co. 1851.

A GLANCE at this book gives us the impression that it will be highly acceptable at this moment. For years we have had the question put, "What book can you recommend us for a guide in the cultivation of ornamental trees and plants?" We have never been able to give a satisfactory reply, for such information could only be found in the perusal of half a dozen volumes, many of which would be considered too costly by most people. This book of BRECK's seems to be just the thing, as far as it goes. It appears to be plain, practical, and concise—much in little, and that little to the point. It is cheap, too, and that is important, because it places it in everybody's reach. It treats of nearly all the popular trees and plants, from the daisy to the cedar of Lebanon, in a way that we think will meet the approval of most people in the country. Our lady friends who are so industriously picking up floral beauties for their gardens, will do well to cultivate an aquaintance soon with Mr. BRECK, through his "Book of Flowers." By-and-by, when the busy season is over, we will give it a more attentive examination. In looking for a few favorites of our own, to see what Mr. BRECK had to say of them, we find a great many omissions not quite pardonable: for instance, among the pines, one of the finest and noblest of them all, the *Excelsa*, is not mentioned. In speaking of the weeping ash, no note is taken of the beautiful *Gold barked* variety. The graceful *Sophora pendula* is also forgotten. Among the spruces, *Abies excelsa*, the Norway, is called *Abies communis*; and the charming new Himmalayan spruce, *Abies morinda* or *Smithii*, is not mentioned at all. This we consider as really one of the most elegant of all evergreen trees. The European Silver Fir, *Picea pectinata*, is classed erroneously with the spruces, under the name of "Abies pulcherrima of Virgil." Among shrubs, too, we find some of the most beautiful things now under cultivation quite omitted, while many others are described that might as well or better have been left out, according to our taste.

* * *

PEARS.—The *Louise Bonne de Jersey* and *Louise Bon d' Arrancke* pears, Mr. DOWNING says, are quite different, as he saw them side by side on the tree in the *Jardin des Plantes* at Paris. We cannot understand this, for we have imported trees under both of these names for eight years past, and have always found them the same. They are considered as synonyms both in France and England, as far as we are aware, and it is possible that M. CAPPE has made a mistake.

Mr. DOWNING speaks of the *Belle Alliance* as being a large and exceedingly beautiful fruit of very good quality, and presenting on the tree, one of the finest sights he remembers to have seen in a fruit garden.



THE WHITE BELLFLOWER APPLE.

Bellfleur White of Downing; *Ortley* or *White Detroit* of Thomas; *Ortley Pippin*, *White Detroit*, *Warren Pippin*, *&c.*, of the west.

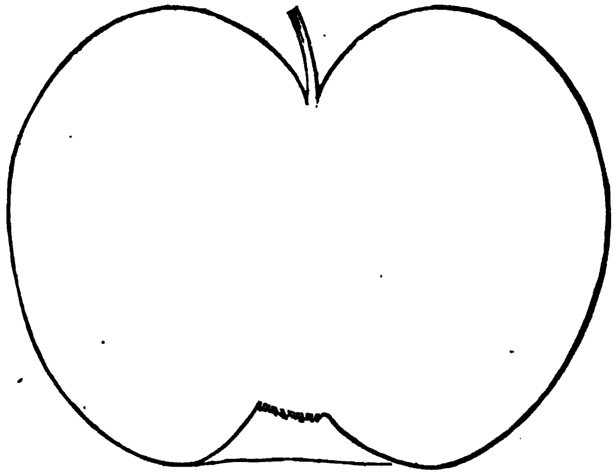
THIS was one of the finest fruits we noticed at the exhibition at Cincinnati last autumn. Specimens were presented in many collections, and all of them were remarkably fine. It is unquestionably a *first rate* fruit for the west. We brought some specimens home with us, and notwithstanding all the carriage and handling they have passed through, they are at this moment (15th March) perfectly fresh and sound—flavor as perfect as in January. The annexed outline is from one of them. Size large. Form conical, generally a little one-sided. Color pale yellow or clear straw color, with a tinge of pink next the sun. Stalk nearly an inch long, slender, and pretty deeply inserted. Calyx closed, in a pretty deep basin, sometimes slightly plaited. Flesh white, crisp, juicy, mild sub-acid, rich and fine flavored. To our taste there is nothing superior at this moment. Tree a fair grower, with slender shoots. Nov. to April.

* * *

AGRICULTURAL EDUCATION IN MASSACHUSSETS.—We are indebted to the Hon. M. P. WILDER, of Massachusets, for a copy of the report of the Commissioner appointed by the Governer and Council of that State, to consider the subject of agricultural schools.

We find this a valuable and interesting document, containing much information respecting the plans on which the most celebrated of European Agricultural institutions are founded, and their system of instruction, besides the outline of a plan for agricultural education in Massachussetts.

We are also indebted to the same gentleman for a report of the proceedings of the "Associated Agricultural Convention," which met in Boston on the 20th of March, to concert measures for the promotion of Agricultural education. The call for this convention was issued by the Norfolk Society, of which Mr. WILDER is the President. Massachussetts is determined to be foremost in this great work. Our "Empire State" is asleep on this subject.



MONMOUTH PIPPIN.
Red Cheek Pippin.

This apple is grown in a few orchards in this neighborhood, and every season in the month of April, it appears in our market, and never fails to attract attention by its fair appearance and fresh, fine flavor. It was originally brought here from New Jersey, where it originated. *Size* large to medium, roundish similar in form to a Rhode Island greening, stalk short, deeply sunk, calyx open, deeply sunk, skin thick, greenish yellow, with a dull red cheek. Flesh yellowish white, crisp, juicy and perfumed, keeps well and retains it flavor and freshness admirably. Tree a very fine upright grower and good bearer. November to Nay. Well worthy of attention as an orchard fruit, always commanding the highest price in its season.

Specimen Pear Trees.—A short time ago, when in Boston, we made a hasty visit to the nurseries of Messrs. Hovey & Co., of Boston. We found their green-houses and conservatories greatly extended and improved ; but the most interesting feature about the establishment, to us, was their extensive collections of pears and their well managed trees. In number they comprise thousands. They are planted in borders along the walks, at six feet apart, and are conducted in pyramids, or low standards. Few of them exceed seven or eight years of age, and yet they are generally in a fruitful state. They are the most creditable examples, without any exception, to be found in any American nursery, and form a school in which valuable lessons may be taken in the art and science of tree culture. Among new pears recently tested, Mr. Hovey speaks very highly of the *Duchesse d' Orleans*, *Beurre Langelier*, *St. Dorothe* and *Triomph de Jodoigne*. The *Swan's Orange* sustains its character well ; Mr. Hovey has many fine young trees of it, showing a profusion of fruit buds, and some of them have already borne fine specimens.

Acknowledgments.—We are indebted to B. P. Johnson, Esq., of Albany, for the April number of the Journal of the Agricultural Society. We learn from it that Governer Hunt has appointed Mr, Johnson delegate on the part of the State, to the World's Fair in London. Letters to Mr Johnson may be addressed to care of P. Thompson, Esq., No. 5 Bank Chambers, Lothberry, London, (post-paid.)

—To James H. Watts, Esq., for fine specimens of Northern Spy and other apples.

A SEEDLESS APPLE.

Mr. Editor :—Permit me, through the columns of the Farmer, to give a short account of one of nature's freaks, as a matter of curiosity ; and to ask of some of your thinking readers an explanation of it. In an old orchard, my father has a large and thrifty apple tree, bearing a fine flavored and finely formed apple, having a dark yellow skin. Now, the peculiarity of this fruit is, that as long as we have been acquainted with it, it has been found wanting in seeds, except in a very few instances, where it contained one or two. The core of this apple, (if it may be said to have any,) is very small, and it is no preventive or objection to its being sliced through, for all culinary purposes. This apple has a rather thick skin. It keeps well till late in the spring, and on the whole is a very good fruit. Specimens of it have been shown to a number of people, some of them eminent nurserymen, but none of them have been able to give a satisfactory solution of the enigma. Perhaps some of your readers may be acquainted with similar instances, and with the process by which this great curiosity was produced ; if so, I should be glad to hear from them. F. D.—*Ballston Center, N. Y.*, 1850.

ANSWERS TO CORRESPONDENTS.

Hedges. — (J. P. Serviss, Hillsdale Co., Mich.) The apples of the thorn, when gathered, should be placed in a *rot-heap* mixed with earth, to remain there during the next season. They should then be sowed in drills, and at the end of the first or second year's growth, will be fit for the planting in hedge rows. *Dwarf trees* are produced both by budding or grafting on certain stocks, and by certain modes of pruning.

(A. E. W., Genesee, Mich.) We have not observed such an insect as you describe. The principal insects that attack young shoots of fruit trees, are the aphides, and they do not sting, but suck the juices. Catalogue has been forwarded.

(D. Webb, King's Ferry, N. Y.) Cherries are dwarfed on *mahaleb* stocks, raised from seed ; pears on *quince*, raised from layers or cuttings ; and apples on *Paradise*, or *Doucain*, from layers. You can usually purchase these stocks in any of the leading nurseries. You will find such a book as you speak of advertised. Scions can be sent by mail in a letter, with safety.

(S. H. Wheeler, Girard, Pa.) Buckthorn will suit you best. Honey Locust will also make you a good hedge.—Seeds of either can probably be obtained at the principal agricultural seed stores. We have written you.

(D. S., Shiremantown, Pa.) The Great Bigarreau cherry can be had of Charles Downing, or A. Saul & Co., of Newburgh. We are much obliged for the information concerning the Gen. Hand plum.

(James Edgerton, Barnesville, Ohio.) The great requisition in a quince stock, is vigorous growth. In this particular the common apple or Orange variety is deficient, compared with others, and pears are stinted on it, and do not form a perfect union.

(H. T. Woodward, Beloit, Wis.) You can probably obtain a copy of the proceedings of the New York Pomological convention by applying to A. J. Downing, Esq., of Newburgh, or S. B. Parsons, of Flushing, L. I. Those of the Cincinnati convention, of B. Hodge, of Buffalo, or F. R. Elliot, of Cleveland, Ohio. The Tartarian Honeysuckle is easily propagated both by *layers* made in summer, and cuttings taken off in winter. They root as freely as the currant.

Names of Fruits — "Tart Bough," for aught we know to the contrary, is a synonym of the Early Harvest. Royal, Hertfordshire, and Winter Pearmain, all mean the same thing. "Steele's Red Winter" is a synonym of the Baldwin. "Ortley Pippin" is a synonym of Detroit of the west, or White Bellflower. Early Red Margaret is the true name, and so is Early Sweet Bough — Large Yellow Bough of Downing.

Ladies' Department.

THE FLOWER GARDEN.

Culture of Annual Flowers.—To succeed well in this, there are a few points that should be well considered:—

1. The ground must be deep, rich, and mellow, of such texture as not to harden or bake with rain and drouth. When the seeds are sown, it must be as finely pulverized as it is possible to be; because the seeds are generally small, and require a very light, even covering, which can only be given in a *fine* soil. When hard, stiff, or lumpy, the seeds get buried too deep and beyond the reach of a sufficient quantity of air, and heat, or they are exposed to an excess of air, and either do not germinate or perish during the process. *Richness* is indispensable, if a luxuriant growth and brilliant large flowers are wanted, and this especially for the more robust species. For succulent plants, such as the portulaccas and mesembryanthemums, a dry, poor soil, will do well enough. They derive a great portion of their nutriment from the aerial gases. Balsams and coxcombs in particular require high feeding, and therefore a rich, deep soil.

2. The *seeds must be sown at a favorable time.* If put in the ground too early, they rot from the want of sufficient heat to effect the process of germination and assist their growth. We generally succeed best by sowing in the open border, about the first to the middle of May, and generally the latter. If the weather be very dry, water must be applied in the evening through a fine rose of a watering pot. Heat, air, and moisture, are the great agents of vegtation.

4 *Transplanting.* Many things do well by being sown where they are to bloom—the nemophilas, portulaccas, mesembryanthemums, and mignonette, for example; but the better way in general is to sow the seeds in a well prepared border, and transplant them into their permanent situation, when an inch or two in height. This should be done in a moist, dark day, or evening. The earth being wet, adheres to the roots, and especially if taken out with the point of a trowel.

4. *Arrangement.* Where they are scattered along a narrow border of a walk, the arrangement requires little skill; but when they are grouped in beds or figures on a lawn, care should be taken to place the tallest in the center, having the dwarfs or lowest at the edge. They should not be crowded, each plant should have space enough allotted it to obtain its full natural habit and dimension, as nothing looks more confused or disagreable than a crowded mass of promiscuous flowers. A mass of verbenas, or dwarf phloxes, may run into each other with propriety; but different species should be seen distinctly and separately.

Bedding plants. A flower garden composed of verbenas, petunias, fuchsias, heliotropes, cupheas, salvias, scarlet geraniums feverfews, everblooming roses and such things, is much easier managed than that composed of annuals; for the plants, when turned out of pots about the last of May, or begining of June, are in bloom in a few weeks, and with a little attention to tying up, pegging down, and triming, continue in bloom till frost comes; while a succession of annuals is required for a succession of bloom. The bedding plants are therefore better for those who have little leisure. They, too, must have a rich deep, and mellow soil, and in dry weather copious supplies of water, and some liquid manure occasionally, to sustain their vigor; for if they cease to grow, they cease to bloom—the flowers being produced on the new shoots.

THE FUCHSIA.

We are pleased to see the interest felt by ladies in the cultivation of flowers. When we offered, in the March number, "a small collection of flower seeds to those who applied in season," we supposed that a hundred or two of packages would have supplied the demand; but we are gratified that our calculations were far below the mark. We have already sent the two hundred packages we at first prepared, and have now more than five hundred applications; and this is not all, for "still they come." The seeds of our own raising, and a few that we procured from Europe, are nearly exhausted; but by further purchases and collections from our friends, we shall endeavor to supply the demand. We may not in all cases be able to send all the kinds we should prefer to, and shall have to give them in small quanties, but we shall send only those that are good, and, under the circumstances, do the best in our power for the lovers of flowers, regardless of trouble or expense.

The cultivation of flowers affords the most innocent and refined pleasure. It is a pleasure cheaply purchased, and within the reach of all—alike accessable to the rich and the poor. It enlivens the gloomy mind, and invigorates the feeble frame. The moral lesson taught by flowers is worthy of attention. Their beauty refines the taste and improves the heart. Flowers afford food for reflection—"Consider the lilies of the field, how they grow; they toil not, neither do they spin, and yet I say unto you that even Solomon in all his glory was not arrayed like one of these."

Youths' Department.

A WALK THROUGH THE GARDEN IN MAY.

FOREIGNERS universally express their surprise and delight at the beauty of the American Autumn.—Those fine, smoky days in November, when the woods assume their richest dress, coloring the waters of brooks and streams with the most beautiful shades of scarlet and crimson, are unknown we believe in any other part of the world. But who praises the American Spring? Occasionally we have a fine warm day, but it is only occasionally—few and far between—while cold winds and rains are common enough. Yet we should not complain, as this weather keeps back vegetation, and gives us more time to plant trees, and shrubs, and arrange our walks and beds, and prune and get every thing in order for fine weather. Too many neglect these things during the unpleasant weather in spring, and consequently they have every thing to do at once, and are a little behind during the whole season. But this is not the case with our garden, as you will see on passing through it. As we promised to visit the garden again this month, we will see what progress has been made. You will notice that the roads are all now in complete order, and the general appearance of the garden entirely changed since last month. Then everything looked unfinished—ground partly dug and partly planted; now it has much more of a finished appearance, and looks in better order.

The *peas* we noticed last month as just making their appearance, have grown so rapidly that they need sticks, which you see placed to support them. Others are just appearing above the ground. These were sown later, and when the first have done bearing these will supply their place.

The *pie plant*, or *rhubarb*, now has large leaves, and long leaf stalks, fit for use. *Currants*, and *gooseberries* are now in leaf and blossom. The peach buds are swollen, and the earlier kinds just bursting, and unless we have frosty weather as the trees are going out of blossom, we shall probably have a good crop of this delicious fruit.

Under the shelter of the fence we see the gardener sowing radish seed. Radishes to be worth eating, must have a very rapid growth, otherwise they are hard and worthless. They require mellow, warm ground. In England they generally cover radish beds with a top-dressing of coal ashes, giving them a black and singular appearance. Wood or coal ashes might be used to advantage in this country.

Beets and *carrots* are sown, and these require a very deep soil, as the roots extend into the earth, and it is impossible to get well formed roots, unless the ground is dug or plowed deep and well pulverized. We have seen the blood beet two feet in length. How could it have grown to such a length if the ground below six or seven inches had been as hard as it is in its natural state?

Beans are very tender, and a slight frost destroys them after they are above ground; so they are not yet planted, and will not be until nearly the last of the month. The most delicious of all beans is the *Lima*. They require long and strong sticks, and are fine when used as shell beans in the summer, or dry for winter. Every body should plant a few Lima beans. They like a dry, warm soil, a little inclined to be sandy.

In the *hot-bed* you see lettuce and radishes fit for use, and *celery*, *tomato*, and other plants, almost ready to put out in the open ground. But it is not too late yet to start celery or tomato plants. Once we started them in a warm sunny situation on the first of May, without heat from manure, merely by placing a few boards around and covering them nights, and had them ready to transplant in pretty good season.

Melons and *cucumbers* are now sown in the open ground, though in the hot-bed you will see melon plants in pots. These will be placed in the open ground the last of this month, and will be earlier than those started from seed in open ground. But those who have a warm sandy soil, can raise good melons without this trouble.

Asparagus is a great luxury, and as the gardener is now making a bed, we will notice his operations. The plants he is placing in the bed are two years old from seed. The seed is sown in the spring, in drills about one inch deep, and twelve inches apart. Some at this stage water them with boiling water. They are then covered, and the earth well pressed down. In two years the plants will be ready to transfer to beds. Those who live near nurseries had better buy plants, as they will thus obtain asparagus for use two years earlier. As we can not stay to see the whole operation of making the asparagus bed, I will explain it: Mark out a bed about four and a half feet wide, and as long as is needed, dig out the surface earth three inches deep, and lay it on the sides of the bed; then spread short well-rotted manure three inches thick over the bed, dig it well in, and smooth off with the rake; then line out four rows on the bed length-wise twelve inches apart, and the two outer rows nine inches from the edge of the bed. Place the plants flat on the rows twelve inches apart; this will make them twelve inches apart each way; then fill up the bed with the earth taken out, and dress it neatly off with the rake.

In cultivating the garden, as in everything else, it is necessary to do whatever you attempt, *well*.—Dig deep and make the soil fine; this is digging well. Manure well, for manure is the food of plants, and without this food they will either die from starvation, or be poor and sickly and worthless, if they find enough in the soil barely to sustain life. In the next place, sow the seed carefully, so as to have it even all over the bed—not too thick in some parts, and too thin in others, as is too often the case.—Then take good care of the plants when they come up, by destroying all the weeds that interfere with their growth, and take the food from the soil which your plants need. Keep the ground mellow, so that the air can penetrate, and the rains descend to nourish them. If they require brush like peas, or poles like beans, to sustain them, furnish them early, a little before needed; for if a little too late, the plants droop and become injured and never obtain a good form. If done early, you have the satisfaction of seeing the fruit of your labor; if too late, you have had all the trouble and very little compensation. So it is with farming and gardening operations generally; he that expends his time and labor in doing things *well*—and to be well, of course must be seasonable—is generally satisfied with the result of his labors; but he that half does things never gets paid even for the labor actually bestowed. And this is right, and in accordance with nature and revelation. He that improves his talent shall receive still others; but he that improves it not, shall lose even that he has.

Editor's Table.

Giving Credit.—The Albany Cultivator and American Agriculturist have had considerable to say reprobating the common practice of copying articles, and using other men's knowledge without giving due credit We have suffered depredations of this kind so long, that they very rarely provoke a passing remark. It would be an easy task to fill a volume with plagiarisms perpetrated on the senior editor of this paper. In 1845 and 1846 we published in the Genesee Farmer sundry articles on the culture of wheat, showing. from our chemical researches, the intimate relation that subsists between clover and this important cereal. On page 56, volume 7, we use the following language:

"There are 7.7 lbs. of ash in 100 lbs. of dry clover. If this crop be taken from a field for a number of years, without making restitution, it will be found quite exhausting, notwithstanding the power of clover to draw its organic nourishment from the atmosphere. An acre of stout clover, when perfectly dry, has been known to weigh 3693 lbs., containing 284 lbs. of ash. This is some 60 lbs. more than is removed from an acre in a fair crop of wheat. It is useful to study the mineral elements of this plant in connection with those of wheat. In 284 lbs. of the ash of clover there are of

Phosphoric Acid,	18.00 lbs.
Sulphuric Acid,	7.00
Chlorine,	7.00
Lime,	70.00
Magnesia,	18.00
Potash and Soda,	77.00
Silica,	15.00
Oxide of Iron and Alumnia,	00.90
Carbonic Acid,	71.00
	283.90 lbs.

"Throwing out of the account the 71 lbs. of carbonic acid, we have 213 lbs of earthy matter. An acre of wheat needs, to form both seed and straw, 17 lbs. of phosphoric acid An acre of good clover will furnish 18 lbs. That quantity of wheat needs 2 lbs of sulphuric acid. An acre of clover will supply 7 lbs. The former needs 1 lb. of chlorine—a substance that forms 60 per cent. in common salt. Clover will furnish 7 lbs. Wheat (an acre) needs 16 lbs of lime. Clover will supply 70 lbs. Wheat needs 13 lbs. of magnesia. Clover will supply 18 lbs. Wheat needs 24 lbs. of potash and soda; (and an excess.) Clover will furnish 77 lbs. Wheat needs 121 lbs. of silica; of which clover can furnish only 15 lbs. Except silica, or sand, it will be seen that an acre of good clover yields all the several minerals needed by a crop of wheat; and some of the most valuable ones. in large excess. In its *organic* elements, the supply is not less abundant.

	Carbon.	*Oxygen.*	*Hydrogen.*	*Nitrogen.*
Clover has in 3693 lbs.	1750	1396	185	78
Wheat crop, 3124 lbs.,	1487	1262	171	32

"It is particularly worthy of note that clover yields more than twice as much *nitrogen* as both the wheat and straw require It is proper to state that to make 3693 lbs. of perfectly dry clover. one must have 4675 lbs. of common clover hay. But in plowing in clover for wheat. we gain all the stubble and roots, in addition to what the scythe slips in mowing."

The editor of the Michigan Farmer, without so much as naming this journal at all, in his "prize essay on wheat culture," published in January. has made some professional reputation by following our language and ideas thus closely:

	Wheat.	*Clover.*
"Phosphoric Acid.	17 lbs.	18 lbs.
Sulphuric Acid,	2	7
Chlorine,	1	7
Lime.	17	70
Magnesia,	13	18
Potash and Soda,	24	77
Silica,	115	15

"Thus it appears that all these mineral elements, except sand, the clover plant supplies more than the wheat plant takes away, and one of them. which, perhaps, is the most important of all, viz: lime, it supplies four times the amount which the wheat crop requires. And these elements are drawn, to a great extent. from a depth where they previously lay in an unavailable state. There is a deficiency in the quantity of silica. or sand. which the clover plant furnishes, but in this there is no deficiency in our ordinary wheat lands, except that it exists there in an insoluble, and therefore unavailable state. But if the clover plant furnishes the material to dissolve it. it does the same thing as to supply it, and this is just what it does. Potash is the very element to bring it into requisition, and of this element the clover plant furnishes three times as much as the wheat crop requires

"While the clover thus largely exceeds the wheat crop in the mineral elements it contains, it also furnishes a somewhat larger amount of all the organic elements, drawn mostly from the atmosphere, viz: carbon. oxygen. hydrogen and nitrogen. Of nitrogen, the clover crop contains two and a half times as much as the wheat crop. and this is an element more frequently deficient in the soil, more difficult to be supplied, and, we may add, more important to make the other elements available. than, perhaps any other, although it is found only in the small proportion of 32 lbs. to an acre of wheat."

Had the Genesee Farmer been copied throughout the essay, the writer would have escaped the errors which impair the value of his performance. We must do him the justice to remark that he gives "Dr. **Lee**" credit for his analyses, but for nothing more.

In the "Supplement to the Prize Essay," which appears in the April number of the Michigan Farmer, the editor adopts our remarks almost verbatim, on the relative advantages of turning in clover with the plow to enrich land, and feeding it to domestic animals and applying the manure, without giving the least credit. What we had to say on the subject, was based on chemical researches, which cost both time and money, and for which we were paid nothing. After working several years in Western New York, we took, in 1847, a fair apparatus for the analysis of soils to Georgia, but did not realize enough to pay the breakage of glass-ware in getting it out and back to Washington, while two years in Augusta.

These facts are named, not in the way of complaint, but that our numerous readers out west (who are also readers of agricultural journals there which habitually throw stones at the Genesee Farmer,) may judge rightly of the motives of its assailants. We wish them all prosperity and shall never place a straw in their way. The closer they adhere to the teachings of this journal, whether with or without credit, the more prizes they will win.

New York State Fair.—During the past month, **John Delafield**, of Seneca Co., President of the State Agricultural Society, Col. **Sherwood**, of Auburn, and J. B. **Burnett**, of Syracuse, visited our city for the purpose of selecting ground for the next *State Fair*. They were entertained by a committee of citizens, who had designated several places as among the most eligible for the purpose. We were much gratified by this visit of these sterling friends of agriculture, and hope to enjoy their society often during the coming season. It is the intention of our citizens and the officers of the Society, to make the coming exhibition creditable to the Society, and to the reputation of the "Genesee Valley."

Premiums—In consequence of the early day at which we are compelled to put our paper to press, we are unable to announce our premiums this month as we intended to do. We are compelled to stereotype the Farmer before the 15th, and even with this arrangement some of our subscribers have too much cause to complain of the late arrival of their papers. The premiums will be awarded next month.

New York and Erie Railroad.—This invaluable work approaches its completion. Cars will soon run from Dunkirk, on Lake Erie, to the city of New York, save the ferry across the Hudson from Jersey city. The luggage or baggage of passengers will be checked through from New York to Cleveland, Toledo, Detroit, Milwaukie and Chicago. "Competition is the life of business."

Melancholy Death of John S. Skinner, Esq.—Since our last paper went to press, **John S. Skinner**, Esq., the founder of the American Farmer, in Baltimore in 1819, (the oldest agricultural journal in America) met with an accident in that city which suddenly terminated his valuable life in the midst of its greatest usefulness. In going out of a room in the interior of the Post office, he unfortunately opened a wrong door and stepping out, fell into a cellar and received such injuries, a fracture of the skull and others, that he never spoke afterwards. The deceased was widely known and esteemed for his integrity, talents, industry, and life-long devotion to the advancement of agriculture. His labors have been eminently useful to his country; and nothing but the lack of space prevents us from expressing, at much greater length, our appreciation of his worth as a man, and distinguished services as an agricultural writer. At the time of his death he was editor and proprietor of "The Plow, the Loom and the Anvil," published in Philadelphia.

Death of Gov. Isaac Hill, of New Hampshire.—Mr. **Hill**, founder of the "Farmer's Monthly Visitor," and an agricultural writer widely known, has died, in Washington city, of a pulmonary complaint, within a few weeks of the present writing. As a political journalist and Senator in Congress, he acquired a national reputation. As an agriculturist, his efforts were well directed and reasonably successful.

Work for the Month.—May is one of the busiest months in the year with farmers. It is seed time in all the northern States; and such as would enjoy the blessings of generous harvests must plant and sow in due season. All the manure one can reasonably command should be placed in the soil, and within reach of the roots of growing plants. The skilful use of manure is a matter of great importance, especially that of never spreading too little, nor too much, on a given area of land. The right quantity per acre to secure the largest return, is a mooted point among practical cultivators. That question settled, the depth at which manure should be covered is another question about which men differ in opinion. Four to six inches is the depth generally preferred, so far as we are informed.

It is much to be regretted that all the manure wasted in cities and vilages, which is so much needed to give crops a start in May and June, can not be carried in the country and used. The tillage of much poor land that might be fertilised, is a serious public loss. To lessen this as far as practible, every farmer should cultivate his soil in the best practicable manner. His plowing, harrowing, planting and hoeing, must be so thoroughly done that his crops will enjoy every element of food which the ground really contains. To secure this advantage is the work for May. If one had a few tons of well-prepared nightsoil to nourish young corn, oats, barley, peas, beans, potatoes and other cultivated plants, it would probably double his harvests. But the science of agriculture is *too* little appreciated in this country for much to be done in the way of preparing the raw material of crops in a concentrated and portable form. We shall waste at least $100 000 worth of the best manure, in Rochester, in the the year 1851, which, by contaminating the air, and perhaps poisoning the water taken into the human system, will doubtless carry sickness and death into scores of families. Time and the good examples of the wise will remedy this obvious folly. To impoverish the soil in the country, and saturate the earth in cities with the contents of the vaults of privies, is the labor of millions.

* * *

In consequence of the unprecedented increase of our circulation, now nearly forty thousand, and the time required to print so large an edition, some of our subscribers complain that it is late in the month when they receive their papers. To remedy this evil, we have ordered another press, and by the issue of our next number we hope to have our business so arranged that every subscriber can read the Farmer by the first of the month. Communications and advertisments so crowd upon us that we think we shall be compelled to enlarge, by adding eight more pages, and this we shall do without additional expense to subscribers. To meet this increased cost, we depend upon our friends, who have done all that we have asked, and more than we could expect. Still each subscriber might introduce the Farmer to some neighbor or friend, and with but little exertion on the part of those who now take the Farmer, our circulation could be doubled. We can at all times supply back numbers from the 1st of January. Additions may be made to clubs at the lowest rates—*three shillings.*

* * *

Advertisements, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to the farmers. We publish no other. Terms—$2,00 for every hundred words, each insertion, *paid in adaance.*

* * *

S. W., and a number of other articles from correspondents, were received just as we were going to press, and will appear next month.

* * *

M. Shewan & Co., Booksellers, St. Lawrence Arcade, Toronto, Canada West, will take subscriptions for the Genesee Farmer.

Imported Consternation.

THIS celebrated thorough bred Horse will stand the present season, as heretofore, at the farm of the subscriber, two miles west of Syracuse.

In order that farmers, of the most limited means even, may be enabled to breed from this valuable horse, the subscriber has consented to offer his services at the extraordinary low price of $7,00—payable in advance in all cases—reserving the right to reject mares that are deemed unsuitable. Pasturage, well fenced and well watered, at three shillings per week. Mares to be entirely at the risk of their owners. J. B. BURNETT.

Syracuse, May, 1851. [5-3t]

Osage Orange,

FOR Hedges, price $1 per quart, just received at the Rochester Seed Store, No. 29 Buffalo street,

May, 1851. J. P. FOGG & BROTHER.

A New Work on Fruit.

CHARLES SCRIBNER (late Baker & Scribner) has in press, and will publish early in April,

"THE FRUIT GARDEN,"

A Treatise intended to illustrate and explain the Theory and Practice of all operations connected with the Propagation, Transplanting, Pruning and Training of Orchard and Garden Trees, as Standards, Dwarfs, Pyramids, Espaliers, &c., the Laying out and arranging different kinds of Orchards and Gardens, the Selection of Suitable Varieties for different purposes and localities, Gathering and Preserving Fruits, Treatment of Diseases, Destruction of Insects, Description and Uses of Implements, &c., *Illustrated with upwards of One Hundred and Fifty Figures*, representing the Different Parts of Trees, Practical Operations, Modes of Training, Designs for Plantations, Implements, &c. By P. Barry, of the Mount Hope Nurseries, Rochester, N. Y. 1 vol. 12 mo.

SUMMARY OF CONTENTS.

Part I. Describes the different parts of Fruit Trees—Roots, Stems, Branches, Leaves, Blossoms and Fruit; explains their different Characters, Functions, and Practical Classifications. It treats, also, of Soils and Manures, of the best Modes of Propagation, and the General Principles and Practice of Pruning.

This Part is a new feature in Treatises of this kind, and is intended to be the ground-work of all the operations of culture.

Part II. Treats of the Propagation and Management of Trees in the Nursery in detail, both Standards and Dwarfs, beginning with the Stocks and ending with taking up the Trees. The various kinds of Stocks, their particular Uses, &c., are all correctly described.

Part III. Treats of the Laying Out and Arrangements of different kinds of Orchards and Fruit Gardens, the selection of Trees and of varieties, Planting, Pruning, and Training of Standards, Dwarf, Pyramids, and various other forms, in a manner calculated to furnish important information much sought for at this time.

Part IV. Contains Abridged Descriptions of all the best Fruits of well-established merit, with selections for various purposes and localities, and lists of new and promising varieties; also, a Chapter on Diseases and Insects; another on Gathering and Preserving Fruits, and one on the more important Implements used in Fruit Culture. CHARLES SCRIBNER,

No. 36 Park Row, and 145 Nassau St., New York.

April, 1851.

Wayne County Agricultural Warehouse & Seed Store.

E. C. WILDER & CO., Dealers in Hardware, Iron, Stoves, Hydraulic Rams, Lead Pipe, Horse Powers and Separators, Reaping Machines of latest improvement, Eagle Plows, Cast-iron beam do, Vegetable Cutters, Hay Cutters for hand or horse power, and Agricultural Implements of every variety. Paints, Oil, &c.

Palmyra, May, 1851. [5-8t]

Eagle Plows.

WE are now receiving 150 Premium Massachusetts Eagle plows which we offer at 25 per cent. less than ever before sold in Rochester. Farmers are invited to call and examine them. We have a plow-room 50 by 60 feet, expressly for exhibiting Plows and Cultivators. J. P. FOGG & BROTHER,

May, 1850. Opposite the Arcade, Buffalo st.

Bone Manure.

A VERY superior quality of Bone Dust, finely ground and warranted pure, is now prepared at the "Eagle Manufacturing Co." for Farmers and Gardeners. It is perfectly dry, will be packed in tight barrels, and warranted to keep sound in any climate. Apply to ALFRED F. KEMP,

[5 1t*] 62 Beaver street, New York.

Gardening and Farming Tools,

SUCH as Shovels, Hoes, Spades, Forks, Garden Reels and Lines, Transplanting and Weeding Trowels, Floral Rakes, Hedge Shears, and other articles too numerous to mention, for sale at the Monroe Seed Store and Agricultural Warehouse, No. 68 State street, by BRIGGS & BROTHER.

Garden and Field Peas.

SEVERAL choice varieties—some new kinds—of imported Garden Peas. Also, a large lot of Canada Field Peas, of extra quality, just received at the Monroe Seed Store and Agricultural Warehouse, 68 State st. BRIGGS & BROTHER.

600 BARRELS of Bone Black, or Burnt Bones ground, at $2 per barrel. For sale by G. H. BARR,

Publisher of the Working Farmer.

[5-3t] No. 25 Cliff street, New York.

PROUTY & MEARS' CELEBRATED PREMIUM CENTRE DRAUGHT PLOWS. A large assortment can be found at the State Agricultural Warehouse, No. 25 Cliff street, New York.

[5-3t] G. H. BARR.

Seed Planters.

EMERY'S and Platt's for sale at the Monroe Seed Store and Agricultural Warehouse, 68 State street, by

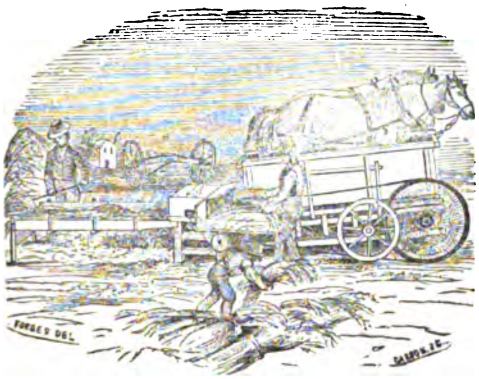
May, 1851. BRIGGS & BROTHER.

SEED DRILLS.—Emery's Improved Seed Drills, the best in use, for sale by J. P. FOGG & BROTHER,

New York State Agricultural Works.

AGRICULTURAL MACHINES AND IMPLEMENTS.

WHEELER, MELICK, & CO. continue their Manufactory at the corner of Liberty and Hamilton Sts., Albany, where they are prepared to fill all Orders with despatch.



Orders for WHEELER'S PATENT RAILWAY, CHAIN HORSE POWERS, and OVERSHOT THRESHERS & SEPARATORS, will receive their prompt attention. The large and increasing demand for these Machines, has induced the proprietors to erect a new and spacious Manufactory, and otherwise extend their means of promptly filling orders. Their Powers and Threshers have been sold in nearly every State in the Union, during the past year, and their superiority has been acknowledged by numerous testimonials, not only from Agricultural Societies but from persons who have used them. They have been awarded the first premiums at all the principal Fairs where they have been exhibited in operation, including the Pennsylvania State Fair, the Provincial Fair of Upper Canada, and the Michigan and Ohio State Fairs, together with numerous County Exhibitions in the different States

The Two Horse Machine with from three to five hands, will thresh from 125 to 200 bushels of Wheat per day, or twice that quantity of Oats.

The One Horse Machine will thresh rather more than half that quantity.

PRICE AT ALBANY.

For Two Horse Machines,	$145 00
For One Horse Machine,	120,00

Machines will be shipped to order to any part of the United States or the Canadas.

The subscribers are now shipping Powers and Threshers to their agents on the Mississippi and Ohio rivers, and in the interior of the States bordering on those rivers, and to all the principal ports on the Lakes, as well as to their numerous agents in the interior of the Lake States. They will be delivered at all our agencies with only the cost of transportation added to our home prices. Persons wanting to purchase, may, by writing to us, learn where they can obtain our machines most conveniently.

N. B.—Our Machines *are warranted*, as heretofore, *to work to the satisfaction of the purchaser*, or they may be returned within sixty days after they are received, and the purchase money, if paid, will be refunded.

We want a few more agents in most of the States. To competent men, who can give satisfactory references, liberal commission will be allowed.

WHEELER, MELICK & CO.,
Corner of Hamilton and Liberty Sts., Albany, N. Y.
(Near the Steamboat Landing.)

For sale by J. RAPALJE & Co., at the Genesee Seed Store and Agricultural Warehouse, 65 Buffalo St., Rochester, N. Y.

CAUTION.

The subscribers, Patentees of *Wheelers Patent Horse Powers*, having noticed that an Agricultural Firm is advertising that Wheeler's Patent Horse Powers and Overshot Threshers are manufactured and sold by them, when in fact they have not obtained from us any liberty to use our Patent, we hereby caution all persons that said firm has no right to use our Patent, or to manufacture or sell said Horse Powers, and that a sale by them will confer no right upon the Purchaser to use such Power.

Messrs. WHEELER, MELICK & CO., of Albany, and their Agents, are the only persons authorized to make or sell *Wheeler's Patent Horse Powers*; and every such Power made or sold by them, or by any person having a License to do so, has upon one of the Cast Iron Semi-Circles at each end of the Power, the words "WHEELER'S PATENT—WHEELER, MELICK & CO., MAKERS, ALBANY, N. Y."

A due attention to this fact will enable purchasers to avoid imposition and fraud.

No person or firm in Albany, except Wheeler, Melick & Co., is authorized to make or sell said Horse Powers.

Albany, April, 1851. A. & W. C. WHEELER, Patentees.

Great Sale of Superior Thorough-Bred Short Horn Cattle.

THE subscriber having more Stock than he can well sustain on his farm, will offer at Public Auction about THIRTY head of his Improved Short Horn Cattle, consisting of Bulls, Cows, Heifers and Bull Calves, on the 26th day of June next, at his farm 2½ miles from this city.

It is known to breeders of improved stock, in this country, and in Canada, that the proprietor of this herd during the past 12 years, has through the medium of importations from England, and selections from the best herds in this country, spared no expense to rear a herd of cattle from which superior animals could be safely drawn for improvement and crosses upon other breeds. His importations have been derived from that eminent breeder, the late Thomas Bates, Esq., of Kirklevington, Yorkshire, England, which herd it is well known has recently been disposed of at public sale by his adminstrators, and dispersed into many hands, and can no longer be resorted to as a whole, for improvement. The announcement of that sale created great interest, and all Short Horn breeders in England seemed emulous to secure one or more of these animals to mingle with the blood of their own herds, and at the day of sale, there was found assembled the largest audience ever before witnessed upon a similar occasion, numbering, as was said, from 4 to 5,000 persons, and among them the best breeders in England, and several from other countries. Some of the animals bro't prices which seemed incredible to many.

In the herd now offered for sale, will be included the Imported Bull, Duke of Wellington, and the premium Bull, Meteor. These are Bates' Bulls, and their reputation as stock-getters are too well known to need any comment. I am authorized to say by Lewis F. Allen, Esq., of Black Rock, one of the most prominent breeders in this country, and who has had ample means of forming a judgment, "That in no instance, to his knowledge, had these two Bulls been bred to Short Horn Cows of other herds, previously imported into the United States, but that their produce were superior in general qualities to such herds."

The most of the Stock which is now offered for sale, have been bred from these two Bulls; and the proprietor, having a young bull more remotely connected with that portion of the herd he retains, (being about 14 in number,) can spare these two valuable Bulls. There will be in the Stock offered for sale, 6 young Bulls, from 8 months old to 2 years, in addition to the two named above; and the remainder of the Stock will be composed of Cows, (most of them possessed of extraordinary milking qualities,) Heifers and Heifer Calves. It is believed that no herd of Short Horns has ever been offered for sale in this country, exhibiting more of the valuable combinations of qualities which contribute to make up perfect animals.

A Catalogue containing the pedigrees of these animals will be ready for delivery at an early period, in which the Terms of the Sale will be particularly stated. A Credit will be given from Six to Eighteen months. Gentlemen are invited to examine the herd at their convenience.

GEO. VAIL.

Troy, N. Y., March, 1851. [4-3t]

Plows! Plows!! Plows!!!

A NEW SERIES OF PLOWS for deep tillage and laying flat or lapped furrows, lately got up by Ruggles, Nourse, Mason, & Co., after long and expensive experiments. Some of the Nos. of this series of Plows are described in an article on Plows and Plowing, by H. F. Holbrook, of Brattleborough, Vt., which has been published in the Albany Cultivator and in Nos. 67 and 68 of Moore's Rural New Yorker.

EAGLE PLOWS of different sizes, among which are the Eagle C and Eagle 20.

SUBSOIL PLOWS, different sizes, plain and full rigged. Also, SIDE-HILL PLOWS, different sizes.

PLOW CASTINGS, such as mold-boards, land sides, and points, for all of the above Plows.

The above Plows and Castings will be kept constantly for sale by the subscribers, at Boston and Worcester retail prices, at the Monroe Seed Store and Agricultural Warehouse, No. 68 State st., where we would be pleased to have all those who take an interest in the improvement of the Plow, to call and examine our assortment whether they wish to purchase or not.

Rochester, May, 1851. BRIGGS & BROTHER.

Flower Seeds.

WE have received from England, since the first of March last, nearly 200 different varieties of Flower Seeds, selected from an English catalogue of nearly 500 different varieties, by gentlemen perfectly competent to make a good selection. We will put up and send to order, 20 papers of the choicest kinds, such as would make a good assortment for any Flower Garden, for $1—45 varieties for $2, and the same proportion for larger quanties. Description and directions for cultivation are given on each paper.

Please call upon, or address (post paid,) to

BRIGGS & BROTHER,
May, 1851. 68 State street, Rochester, N. Y.

Garden and Field Seeds.

WE have received from London, since the first of March, nearly two tons of the choicest Garden and Field Seeds—such as Cabbage, different kinds, Radish do., Turnip do., and Ruta Baga, &c., &c. Also White Dutch Clover, and Lawn Grass for lawns, door-yards, &c. BRIGGS & BRO., 68 State st.

TIMOTHY SEED.—400 bushels, of different qualities, just received, and for sale low by BRIGGS & BROTHER.

GREAT BOOKS
FOR FARMERS, GARDENERS AND HORTICULTURISTS,
AND A
RARE CHANCE FOR AGENTS TO MAKE MONEY.

JOHN P. JEWETT & COMPANY, Publishers, Nos. 17 and 19 Cornhill, Boston, take pleasure in announcing to the intelligent Farmers, Gardeners, and Horticulturists of the United States that they have at length completed their valuable collection of works on Agriculture, and its kindred sciences, and that the two last of the series are now in the hands of the stereotypers, and will be ready for delivery to subscribers and others, on or before the first day of March. The two volumes now in press are, first—

BRECK'S BOOK OF FLOWERS,

By Joseph Breck, Esq., of Brighton,

For many years editor and publisher of the New England Farmer, and one of the most distinguished Florists in America. This volume contains the results of the practical experience of a man of taste and science, and is, without doubt, the most thorough and reliable book on the cultivation of flowers, and the laying out of flower gardens, to be found in any language; it is emphatically the Ladies' and Gentlemen's complete Floral Vade Mecum. This book will be in 12 mo. form, containing about 336 pages, fine cloth binding, and we have determined to sell it at 75 Cents, to bring it within the means of all, and to ensure a large sale; as it is a book which every lover of flowers must own.

The second in the series is—

THE KITCHEN GARDENER'S TEXT BOOK,

By one of the most distinguished Gardeners of New Jersey. This is truly a practical work, avoiding useless, and to the masses, unmeaning technicalities, the author handles his subjects with the skill of a thoroughly versed, common-sense practitioner. With the aid of this volume, the merest Tyro may rapidly advance through the various stages of Horticultural knowledge, to complete success. A simple, practical and cheap work on this subject has long been needed. The price of this book will be 50 Cents, —12 mo., 216 pages, handsomely bound in cloth.

The third book is—

A TREATISE ON HOT-HOUSES,

By Robert B. Leuchars, Garden Architect.

This work, by Mr. Leuchars, who is one of the most distinguished among the many Scotch Gardeners of America, is a practical treatise on the CONSTRUCTION, HEATING AND VENTILATION OF HOT-HOUSES, including CONSERVATORIES, GREEN-HOUSES, GRAPERIES, and other kinds of *HORTICULTURAL STRUCTURES*, with practical directions for their management in regard to LIGHT, HEAT AND AIR. Illustrated with more than *Seventy Engravings*. This is the first and only work of this kind ever published in this country or in Europe, and is recommended very highly by Professors Silliman and Dana, of Yale College, and by many other scientific gentlemen. Price One Dollar. It is a very learned work, and an invaluable one to any person who owns, or who intends to erect, either of the structures upon which it so ably treats.

The fourth book is—

MR. COLE'S GREAT WORK ON

THE DISEASES OF ANIMALS,
OR THE AMERICAN VETERINARIAN,

30,000 copies of which have already been sold, and the sale of which continues in a manner almost without a precedent. To every man who owns a horse, a cow, a pig, or even a hen, this work by Mr. Cole is of more value than ten times its cost.

The lives of many valuable animals have already been saved by following Mr. Cole's plain directons for their treatment when sick. This is the cheapest work of the kind ever published in America, being but 50 CENTS at retail, and we do not believe that any farmer would willingly be without it, if placed within his reach.

The fifth book is—

MR. COLE'S OTHER VALUABLE WORK,

THE AMERICAN FRUIT BOOK,
OR, FRUITS AND FRUIT TREES OF AMERICA,

18,000 of which have been published in less than two years.

This beautiful and thorough work is illustrated by over 200 engravings, of Apples, Pears, Peaches, Plums, Cherries, Grapes, Raspberries, Gooseberries, Currents, &c., &c., and the various Fruit Trees of our own country; also, cuts representing the various modes of training vines, and the different styles of grafting, budding, pruning, &c. It is a work which, for accuracy of description and reliability, has never been exceeded, if equalled, and contains more than twice the amount of matter of any other Fruit Book published in America at the same price, viz: 50 cents. We could fill a volume with the recommendations of Mr. Cole's two books, which we have received from the most eminent Farmers and Horticulturists of New England, the Middle States and the great West.

A WORD NOW TO AGENTS.

We are now prepared to offer to capable, responsible and energetic Book Agents a chance for making money, such as seldom occurs. With the above five works, an Agent of tact or ability could hardly fall upon a spot so barren that he could not dispose of one or more of these works, and in many cases would sell one of each; and in populous districts, a large number of copies could be sold daily. We intend to district out the New England States, mostly into counties. Also, the States of New York, Pennsylvania, New Jersey, Ohio and the Western States, we should prefer to dispose of to some one individual in each State, for him to district out into sub-agencies.

The books will all be ready for delivery by the 1st of March, and it is important that the various Counties and States should be disposed of before that time. A cash capital of from $30 to $50 will be needed by every Agent for a County, and a much larger sum by a State Agent.

Address, post-paid the Publishers,

JOHN P. JEWETT,
17 & 19 Cornhill, Boston

DOMESTIC ANIMALS AT AUCTION.

THE postponed yearly sale of Full Bred Short Horns and Improved Dairy Stock, consisting of about fifty head, will come off at my farm on Tuesday, June 24th, 1851, at 12 o'clock, M. I shall dispose of all the improved Dairy Stock, which is composed of the finest Short Horn, with a slight cross of Amsterdam Dutch, which some writers say was part of the original ingredient which composed the improved Short Horns.

I am now breeding Short Horns, Devons and Ayrshires, each separately and pure, which, owing to the limits of my farm, make it necessary to confine myself to those three breeds. By the awards of the State Agricultural Society, the American Institute, and my own County Society, (with the exception of last year, when I was not a competitor at either,) it will fully appear that I have been a very successful exhibitor. The Cow which won the First Prize as a milker, at the American Institute last year, was bred by me, and composed of the above alluded to Dairy Stock. Several of the Bulls got by Lamartine will be of the most appropriate age for efficient service the coming season. All Cows and Heifers old enough, will be warranted in calf at the day of sale, by my imported Bull, Lord Eryholme, or my celebrated Bull, Lamartine.

I own two thorough bred Devon Bulls; one the celebrated old Major, the other, one and a half years old, imported by me from Devonshire. One of the above animals will be sold—which, I have not yet determined.

A full Catalogue, with the pedigree of each animal, will be published in due time, with minute description of sale, &c.

I also have a number of Suffolk Sows, in pig to my imported Boar, most of the progeny of which will be old enough to dispose of on that day.

I also have about 20 South Down Ewes, most of which I imported from the flock of Jonas Webb, and now in lamb to my imported Buck, Babraham. Some of the Buck Lambs will be offered at auction on that day.

This sale will not only offer an opportunity to obtain Stock from my previous herd, but will also enable persons to procure calves from my imported Bull, lambs from my imported Ram, and pigs from my imported Boar—all of which animals were recently selected by me in person, when in England.

The mode of warranting the Cows and Heifers in calf, is this: in case they prove not to be so, it shall be optional with the purchaser, on his *certificate of that fact*, either to receive from me $25 (say twenty-five dollars) or to send the cow to my farm, and I will keep her the proper time (free of expense) to have her got in calf to either one of my Bulls, which he shall choose. I will give $25 for any Heifer calf from either of the Cows or Heifers sold at the sale, delivered on my farm, at two weeks old.

Stock purchased to be sent at a distance, will be delivered on ship-board or railroad in the city of New York, free of risk or expense to the purchaser.

Persons living at the South, in a climate to which it would not be well that stock should be transported at that hot season of the year, may let such animals as they may purchase, remain with me until the proper season, and I will have them well taken care of, and charge only a reasonable price for their keep. One of my objects in breeding improved domestic animals, is to assist in distributing them throughout the Union, deeming it one, if not the most important feature to promote profit to the cultivator of the soil, and to benefit the consuming country at large.

All communications through the Post please pre-pay, and I will pre-pay their answers, and also a Catalogue if required. Catalogues will be to be had at all the principal Agricultural Warehouses and offices of the principal Agricultural Journals, on and after the 1st day of June next. Persons wishing to view the stock at any time, will find my superintendent, Mr. Wilkinson, to give them the desired information when I am at not at home.

Dated, this 4th day of March, 1851, at Mount Fordham, Westchester County, eight miles from the City of New York, by the Harlem Railroad. [4-3t] L. G. MORRIS.

Farm For Sale.

AN IMPROVED FARM of about 100 acres of excellent land, for only Twenty dollars per acre.

Said Farm lies within one mile of the beautiful and thriving village of Adrian, Lenawee Co., Michigan, on the line of the great Southern Michigan Railroad, running from Monroe and Toledo direct to Chicago, and from thence to the Mississippi river, connecting also with the Road running round the Southern shore of Lake Erie, till it meets the New York and Erie Railroad.

On the Farm is a two story dwelling house, considerable fruit, and living springs that never freeze and never dry. It is unquestionably worth, and will soon command, Thirty dollars per acre.

I will take one-fourth the purchase money down, and the balance in three annual payments.

For further particulars enquire of W. S. Wilcox, Adrian, or of the subscriber, at Lafayette, Indiana.

April, 1851. ANSON TUCKER.

Thorp, Smith, & Hanchett,

PROPRIETORS OF THE SYRACUSE NURSERIES,

SYRACUSE, N. Y.,

CULTIVATORS of, and Dealers in, all kinds of Fruit Trees. Ornamental Trees and Shrubs, Green House Plants Bulbous Roots. Hedge Plants. Seedlings, &c., &c., offer for the spring sales.

A very large stock of the best varieties of Apples, Cherry, and Peach Trees.

A choice selection of native and imported Plum Trees.

And a splendid importation of Pyramidal Pear Trees on Quince, from 5 to 7 feet high, at 50 cts. each, consisting of nearly one hundred of the most celebrated varieties, old and new. These trees have invariably given the most entire satisfaction, and are sold at a quite unusualy low rate.

They have also for sale a large assortment of Ornamental Trees, Shrubs, Vines, Green-House Plants, Evergreens, and Plants for bedding out, among which are

Deodar, and Lebanon Cedars, 3 to 5 feet, price $2 each; Japan Cedars; Magnolias; Daphnes; Altheas; Honeysuckles; Dahlias; Roses of all classes, including *Fortune's China;* Phloxes; Petunias; Verbenas; Maurandias; Lophasphernums; *Calestegia Pubescens*, a new and beautiful climber, covered with a profusion of large double flowers of a delicate rose color from June till cold weather; Heliotropes; Geraniums; Salvias; Double Feverfews; Plumbagos; Tree and Herbaceous Pæonies; Double Lychnes, &c., &c., all of very superior quality and beauty.

☞ Persons favoring us with their orders shall have no cause to complain of the quality of any articles sent them.

☞ Catalogues sent gratis, as usual, to post-paying applicants.

N. B.—T., S., & H. have formed a partnership, under the firm of THORP, SMITH, HANCHETT, & Co., to take place in May next, with Mr. A. FAHNSTOCK, a skillful, practical, and intelligent nurseryman and propagator, who will superintend the management of the Green-House department, which they design shall constitute, henceforth, an important feature in their business. By this arrangement, they become joint proprietors with him in the "Augusta" Rose, an acquisition to the floral world which is destined to create a marked sensation. It will be sent out in the Spring of 1852. [4-2t]

Genesee Valley Nurseries,

BY A. FROST & CO.

SOUTH SOPHIA STREET, ROCHESTER, N. Y.

THE proprietors of this establishment wish to call the attention of Nurserymen, Fruit Growers and Amateurs to their present stock which is partly embraced in the following:

Apple Trees 18¾ cts. each, $15 per 100. Standard Pear Trees 2 years old, 40 cts. each. Dwarf do. do on the Angers Quince, 30 to 50 cts. each. Plum Trees, 50 cts each. Standard Cherry Trees 5 to 8 feet high, with fine heads, 35 cts. each. Standard Cherry Trees, 3 to 5 feet, 30 cts each, or $25 per 100. Peach Trees, 2 yrs old, from bud, very thrifty, 12½ cts. each, or $10 per 100.

All of the above trees are worked with the choicest and newest of their respective kinds, and are remarkably thrifty and well grown. Gooseberries, Raspberries, Strawberries, Currants, &c., all of the newest, and the most of lately imported kinds.

Ornamental Trees, Shrubs, Plants, &c., embracing all the rare and most ornamental kinds.

Green-house and bedding plants in great variety, including a large and most splendid collection of double dahlias.

The above plants will be packed carefully and left at any of the Freight Offices in the city, according to advice, without an extra charge

Our new descriptive catalogue of the above fruits, and giving a general description of the articles now under cultivation, is ready for distribution, and will be mailed gratis to those that apply post-paid.

☞ Office: No. 47 Exchange street. [4-2t]

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THE proprietor has now ready for sale *Ten Thousand* Apple Trees, 4 and 5 years old, from 7 to 9 feet high, comprising all the leading standard varieties, propagated by himself and warranted genuine.

Also, a good assortment of Pears on their own roots, and on Quince for Dwarfs; and Cherries, Peaches, Apricots, Gooseberries, Currants, Raspberries, Ornamental Trees, Shrubs, Roses, &c. &c. Also a quantity of Buckthorn for hedges.

All of the above articles can be furnished of good quality, and as reasonable as at any Nursery in the State.

Catalogues sent to all post-paid applicants.

S. S. GRAVES.

Auburn, N. Y., March, 1851. [4-2t*]

Monroe Nursery.

THE subscriber deems it almost superfluous to publish an advertisement at this time, from the fact that his Nursery is so universally known; yet he would beg leave to say to his friends and the public, that his experience as a Nurseryman of eight years is certainly some guaranty that the articles purchased of him would be correct and adapted to modern cultivation. Of the different fruits, he only cultivates a few varieties, such as has been proved and acknowledged to be the best.

He has a good stock of Apple, Pear, Peach, Apricot, Grape Shrubs, Tuberous, Bulbous and green-house plants at reduced prices. Dahlias also of latest varieties.

Greece, March 1, 1851. [3-8t.] CHAS POWIS.

D. APPLETON & CO., PUBLISHERS, 200 BROADWAY, N. Y.

Downing's Cheap Cottages and Farm Houses.

Adapted to the United Statee.—Price $2,00

THIS volume is Part 1st of Downing's "Country Houses," published separately at half the price of the entire work. It contains numerous designs for Cottages and Farm Houses, of moderate cost, varying from $400 to $4000, and will be found especially adapted to the wants of the American People, who wish to build convenient, comfortable and tasteful homes at a very moderate expense. The volume is illustrated with numerous engravings, and contains all the latest improvements in building, and the use of materials, and plans of barns and stables, and much valuable information as to construction and arrangements of cottages, both in the country and the suburbs of towns.

⁂ Part II. of this work contains villas, with the interiors and furniture of Country Houses, remarks on warming and ventilating, etc. The whole work, complete, called the "Architecture of Country Houses," with three hundred and twenty engravings, is sold at $4,00.

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"No work of more practical and general value has been issued from the American Press for a long time."—*Albany Atlas.*

"Mr. Downing has a great deserved reputation, but he has never issued so elaborate and splendid a volume as the 'Country Houses.'"—*Boston Post.* [5-1t]

Young Morgan Tiger & Sampson Chief.

WILL stand, the present season, on Fridays and Saturdays at the stable of Lewis B Baldy, Seneca Falls, and all other days of the week at the stable of the subscriber, two miles south-east from Clyde.

MORGAN TIGER is a beautiful dark bay, over 16 hands high, possessing figure and action unsurpassed by *any* horse of his celebrated stock, and no evidence can be so satisfactory of his superior qualities as a personal examination of him, and his stock, now one and two years old. He was sired by old Morgan Tiger, formerly owned by Doct. MAY, of Palmyra; dam, by Sir Charles Durock. He was awarded the first Premium at the Wayne Co. Fair, 1850.

SAMPSON CHIEF was sired by the English Draft Horse Sampson, imported by John Robinson, of Palmyra; dam, a Nimrod mare. He, and his stock, are highly prized by farmers and others needing horses of his class. Terms, for either horse, $8 to insure. Pasture, on the farm of the subscriber, at reasonable charge. Accidents at the risk of owners.

Persons wishing to inquire respecting these horses, are referred to Messrs. Hiram Woodruff, Auburn; John L. Hubbard, Waterloo; D. W. Colbin, Geneva; Ab'm Parish, Batavia; and many other gentlemen who know them and their stock.

ISAAC M. GILLET.

Clyde, N. Y., March, 1851. [4-2t*]

Farm For Sale.

THE subscriber offers for sale his Farm which comprises 84 acres, 60 of which is in a good state of cultivation, 2 acres Orchard, planted with choice Fruit Trees—Peach, Apple, Cherry, &c. And 22 acres of Timber Land, 9 acres of which are nearly cleared and easily got under cultivation this Spring.

The Farm is situated in the Township of Raisin, County of Lenawee, State of Michigan, being the west half of the north-east quarter of Section 11, in Township No. 6, south of Range No. 4, east.

There is a good Log House with a new frame addition and cellar, added thereto last Summer, with every convenience for a family wishing a healthy and pleasant location.

The Farm buildings comprise a large Barn with stabling for four horses; a large Cattle Shed with Cow House, New Hog Pens, Corn Cribs, Asheries, Poultry House, &c., &c., with a good Log Work Shop, 20 by 14 feet, all newly Roofed and Shingled last Fall.

In the immediate neighborhood are Churches of most denominations, and good Schools; also Grist and Saw Mills; with good roads and easy distances from Cash Markets.

This Farm is to be sold solely on account of the owner having had a hasty call home to his native country, and to a Cash Purchaser, without delay, may be had for $1.700. There is neither Mortgage, or any incumbrance thereon, and the stock, comprising every article necessary for working, may also be had on advantageous terms.

Apply personally, or post-paid, to

R. HEICH,
Raisin, near Tecumseh, Mich.,

or to R. W. VIVIAN, Esq., 296 Broadway, New York, or of B. A. MANCHESTER, Esq., 6 East Seneca street, Buffalo.

April, 1851. [5-1t]

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Arnold's Block, Rochester, N. Y.

THE subscribers, under the name of Briggs & Brother, are now opening a new Seed Store and Agricultural Warehouse, located as above, which will be known as the

MONROE SEED STORE AND AGRICULTURAL WAREHOUSE,

where will be kept a full assortment of American and Imported Field, Garden, and Flower Seeds, and the most approved Agricultural Implements and Machines. Those wanting any thing in our line are requested to call. We will make it an object for such to do so.

CHAS. W. BRIGGS,
of the late firm of Rapalje & Briggs.
Rochester, May, 1851. JOHN T. BRIGGS.

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VOLUME XII, FOR 1851.

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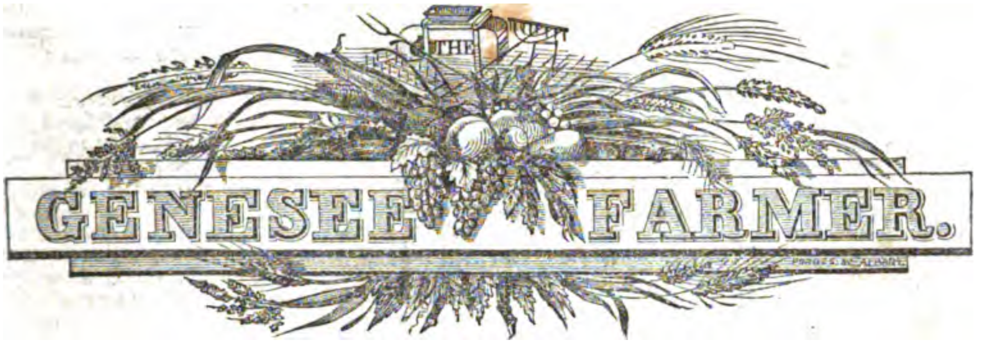
DANIEL LEE,
December, 1850. *Rochester, New York*

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.



THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—JUNE, 1851. NO. 6.

UNDER-DRAINAGE AND LIMEING.

"Under-drainage," says Mr. Pusey, "has been used in England since the great rebellion, as Lord Braybrooke has shown, and it received a new impetus from the late Mr. Smith, who coupled it with subsoil plowing." By private enterprise, about 600,000 acres in the great Level ot the Fens have been drained, although below high-water mark. The water is wholly pumped out by steam power and windmills. To avoid this expense and obtain a natural fall of 11 feet in 30 miles, the Fen men have just paid £150,000 ($750,000) and "have agreed to contsibute £60,000 more towards new works in the Wash," merely for the benefit which will arise to their drainage.

Fortunately there is much less occasion to drain land in this country than in England, but even here, the necessity really exists in millions of acres. Tiles which formerly cost 90*s*. per 1000 feet, *i. e.* 60*s*. for tile and 30*s*. for soles, can now be wholly dispensed with, and pipe of 1½ inch aperture substituted, which costs but *one-sixth* of the money, or 15*s*. per 1000 feet. A kiln for burning tile or pipe, on the cheapest plan, costs but £5, or $25. It has been tried by Mr. Hodges, the inventor, six years, and answers every purpose. In estimating the expense of draining, Mr. Parkes remarks: "The fact is that we have been too systematic in draining, especially when the work is begun upon a grand scale. The source of economy now must be in the maxim, that *one drain well laid to suit the circumstances, will often save a dozen by rule.*" There is great force in the above observation, for many fields require but one, two, or three well-laid drains in the proper places, instead of covering the whole area with one in 25 or 30 feet. Experience has taught this important lesson in England, that a soil may be *over-drained.* It is about equally injurious to crops to have too little or too much water in the earth where they grow. A good practical farmer is seldom at a loss to decide whether any part of arable meadow or pasture land is too wet for the production of wheat and clover. If the ground is too moist for these erops to do well, timothy and most other English grasses will not yield sweet and nutritious food.

Much has been written on the subject of the depth of drains; some contend that four feet is shallow enough under any circumstances, while others are content with drains only 30 or 36 inches below the surface. Few farmers have gone below three feet in making drains in the United States, and this depth seems to answer every useful purpose. Horse power is often applied to the excavation of ditches preparatory to putting down either tile or pipe. The latter is so much cheaper, and withal less liable to get stopped up, that pipes, and collars at the joints, are taking the preference and seem likely to drive horseshoe tile out of use. The collars are intended simply to protect the joints of the clay pipe, and are somewhat larger than the pipe which they surround, so that water can run in freely at each joint to fill the conduit. Before the earth is thrown in upon either pipe or tile, straw, or inverted turf, is spread over it to keep the soil from settling compactly around the apertures into the pipe or tile. Some use horseshoe tile without a sole or bed-piece, but the pressure of the earth from the superincumbent weight is apt to force up the clay into the concave tile, and completely stop the drain. The deeper the drain, the greater is the danger of this result.

John Delafield, Esq., the distinguished President of the N. Y. State Society, has the honor of being the first to import a Tile-Making Machine into this country, which, we are happy to say, has answered every expectation and served as a model for the manufacture of many others, with such improvements as American skill has been able to suggest.

In regard to the cost per rod of making a ditch, buying and putting down either tile or pipe, in the best manner, we are not sufficiently informed to express our opinion. Some gentleman in Seneca, Cayuga, or any other county, who has had experience in the operations named, will oblige us by communicating the results of the same for the Farmer.

Limeing, as well as draining, has been more practiced in England and Scotland than in any other country. Without some lime in a soil, no crop can grow; and there are, comparatively speaking, but few districts in the United States where there is as much calcareous matter in the earth as is desirable. There is, however, an essential difference in the action of fine limestone naturally in the soil, and caustic, recently burnt lime applied by the hand of man. The latter acts powerfully on all organized substances and organic acids, and thereby sweetens sour soils. It also more readily decomposes salts of iron, alumina, and other minerals, and forms bone earth, or phosphate of lime, gypsum, or sulphate of lime, the chloride of lime, and other valuable fertilizers. We were on the beautiful farm of Mr. Patterson, near Baltimore, not long since, which has been dressed with lime at an expense of some $40,000. Mr. P. informed us that he applied quick lime at the rate of 200 bu per acre; there are some 1400 acres in the farm. The lime was hauled several miles, and the experience of many years has proved the operation to be a profitable investment. The land was badly exhausted in tobacco culture, before the revolution. It now produces excellent clover and wheat. We have visited the plantation of Gov. Hammond, of South Carolina, on which have been spread over 300,000 bushels of unburnt marl, composed of marine shells, more or less finely comminuted. In this case, the result has been equally satisfactory. Gov. H. applies about 200 bu. per acre. More lime is used in New Jersey, Pennsylvania, Delaware, Maryland, and Virginia, than in any other part of the Union. Its high price, and the equal lack of other elements necessary to the growth of cultivated plants, diminish the consumption of calcareous manure. Where the cost of the article is a serious impediment, much less should be applied to an acre; even five bushels will pay well in addition to other ingredients. The ten thousand miles of railway now completed, must obviate the difficulty of procuring lime in many States, and we hope that all farmers will give this mineral a fair trial. Land that abounds in organic matter or mould, requires more lime than a soil which possesses very little. Wet pieces of ground which have recently been drained, are peculiarly benefitted by a liberal dressing of caustic lime, which may either be harrowed or plowed in, as circumstances may seem to favor. Moderate doses, and often repeated, is a better practice than large ones at distant intervals.

Recent discoveries by Prof. Way, and others in England, go to prove the necessity of lime in the soil not merely as an element of nutrition to be taken into the circulation of plants, but as an ingredient which is indispensable for the most favorable action of manure of every kind that yields ammonia. By decomposing salts of lime, such as the carbonate, sulphate and chloride, in the earth, ammonia is arrested and retained to feed and nourish vegetation. Stable manure operates much better on land that contains from one to three per cent of lime, than on that which contains only one-tenth of the proportions named. Every observing farmer knows that any given quantity of manure does produce equal results on all fields. Hence the question has been much discussed whether a man will make most money to apply his manure on his best or on his poorest land. As a general thing, the gain from the manure will be greater on good than on poor soils. Large experience, in countries where arable land is less abundant than in this, has shown the wisdom of limeing poor fields and thoroughly incorporating the alkaline mineral with the earth, before applying manure. If the dead clay contains any alum, lime will convert its sulphuric acid into gypsum; if it contains copperas, gypsum will also be formed. If it possesses any phosphate of alumina, or iron, as poor soils often do, then lime forms bone-earth by combining with the phosphoric acid. Suppose the earth be nearly pure sand, alumina, (clay,) and iron—the commonest sort of poor land—and lacks vegetable matter, and all fertilizing acids and alkalies, even then it is advisable to apply lime, not in the expectation that it will alone suffice to renovate sterile earth, but to prepare it for the reception of organic manures. Lime is truly one of the staples of fertility, and those that can readily command it should see that all their pastures, meadows and tilled fields do not lack calcareous matter.

THE ECONOMICAL USES OF PEAT.

The Journal of the Highland Agricultural Society for the last quarter, contains an exceedingly instructive paper from Dr. Anderson, Chemist to the Society, on the "Economical Uses of Peat." The researches of Dr. A. were directed to the object of determining, by careful experiments, the actual and relative powers of dried peat and peat charcoal to absorb and retain ammonia, and other gaseous bodies, which escape from nightsoil, stable manure, and other putrescent substances. His Report fills fifteen pages in the Journal named, and it ought to be reproduced in this country. We can find room only for the results obtained, with little of the details of the processes and experiments. We will state, however, that peat, for making coal, is cut into pieces equal to the half of a cubic foot and placed on trays or baskets of wicker-work, one above another, to dry. It is then carried to the building in which the burning takes place, where it is arranged over furnaces and still farther dried six or eight days. The furnaces in which it is carbonized may be described as a sort of pyramidal boxes of sheet iron of variable length, and about five feet wide at the bottom, gradually tapering to about a foot at the top where there is a sort of vent-hole. These pyramidal furnaces are open at the bottom and stand in trays also of sheet-iron. They are filled by tilting them on their sides, when the dry peat is carefully packed in, and retained in by bars which pass across the bottom; and after being fired they are returned into an upright position. The combustion is allowed to go on until the flame ceases, which generally requires from five to six hours. Water is then let into the tray so as to exclude all air from the furnace, and thus extinguish the remaining charcoal. The reader will see that this is a very simple apparatus and must be effectual. The water in the tray does not rise high enough to reach the peat, or coal in the furnace. When it is cooled down sufficiently, the coal is removed and put through large sieves, the larger pieces being employed as fuel and the fine powder as a deodorizer. In Ireland, the cost of production appears to be as follows:

	£	s.	d.
Draining the bog and cutting the turf to produce a ton of dried peat,	0	1	6
Packing on the trays and wagons, and conveyance to the furnace-house,	0	2	0
Wear and tear, &c.,	0	0	6
	£0	4	0

It requires four tons of peat to make one ton of coal.

	£	s.	d.
Four tons of peat, at 4s.,	0	16	0
Labor, and expense of burning,	0	4	6
Grinding and sifting,	0	2	6
	£1	3	0

By the above figures it will be seen that a ton of peat coal costs nearly six times more than a ton of air dried peat.

We must now pass over much that is valuable to reach the comparative power of dry peat and peat coal to absorb ammonia.

"*Experiment* 1. A glass tube about half an inch in diameter, had a piece of cloth tied over its lower end, and was filled to the depth of about twelve inches with Irish peat charcoal and a solution of ammonia, containing 2.42 grains to the cubic inch, poured into it. The first drop of fluid that passed through it was as distinctly alkaline as the original fluid, indicating that no rapid, or abundant absorption had taken place."

In the second experiment, putrid urine, which had a distinctly alkaline reaction, was used, and the first drop was distinctly alkaline. The liquid, however, lost both its smell and color in passing through the coal.

In the third experiment, a small quantity of ammonia, in solution, was poured over 1000 grains of charcoal and carefully stirred in. The smell of ammonia *did not disappear*, even after it had been covered up some time, and a test paper suspended in the upper part of the vessel was strongly affected. An additional quantity of ammonia was added, until, in all, 1.7 cubic inches had been used. This quantity of the solution contained 4.11 grains of ammonia, and it was consequently obvious that peat charcoal cannot absorb one-fourth of one per cent of ammonia—4 parts in 1000.

Without pursuing these experiments farther at this time, suffice it to say, that they contradict and seem to overthrow all previously conceived notions of the relations that subsist between ammonia and charcoal; but if these notions are really erroneous, the sooner they are overthrown the better. The truth is what is wanted—not error, however plausible.

1000 grains of surface peat—not charred, but dried at a temperature of 212°—took up 8.3 cubic inches of a solution of ammonia, equal to 20.08 grains of the alkali, or 2 per cent of the peat. 1000 grains of peat, dried to the same degree, taken 4½ feet below the surface, took up 21.78 grains of ammonia, or over 2 per cent. These experiments prove that thoroughly dried peat imbibes some eight times more ammonia than the too open peat charcoal. Hence, dried peat is one of the best substances known to mix with manure of all kinds, and for bedding for horses, cattle, sheep and hogs, to absorb their urine.

Dr. A. experimented to determine the relative power of "a good wheat soil" and dry peat to absorb and retain ammonia. The soil was found to contain 0.186 per cent of nitrogen, (the fertilizing base of ammonia) and only 0.203 per cent when fully saturated; indicating the absorption of only 0.017 per cent under the circumstances. As peat absorbs about 2 per cent, the difference is greatly in favor of the latter.

The readers of the Farmer in 1845 and 1846, will remember our urging the importance of digging and drying swamp muck for bedding for domestic animals and to absorb all liquid and semi-fluid manure. When applied *alone*, the experiments made by Mr. McVean, and others in Wheatland, did not indicate so high a value in muck or peat as Prof. Norton suggests in his excellent letter in our last.

PARING AND BURNING.

At a late meeting of the Staindrop Farmer's Club, Mr. Heaviside said that he would "break up all the old, tough, matted pasture land, and secure the improvement of its herbage, if subsequently it should be laid away [seeded again]; but he would *pare and burn, and not plow in the sod.* He had tried both plans, and if he might judge from the crops, he had 100 lbs., in one case, by adopting the plan of paring and burning instead of plowing in the turf.

This quite common practice in England, of paring off a part of the turf in old pastures and meadows, drying and burning it, is seldom, if ever, resorted to in this country. The advantages of the operation may be thus briefly stated:—The soil in such cases, contains an excess of vegetable matter, and, usually, an excess of acids which need to be neutralized. By paring or cutting off a part of the turf, and drying and burning it, a considerable quantity of ashes is produced, which, having an alkaline reaction, corrects any acidity that the organic matter below may exhibit when turned up by the plow, and decomposed preparatory to seed with wheat or other grain. Lands of this character are apt to be too wet for the production of the most nutritious grass and heavy crops of wheat. Draining, in such cases, should precede tillage. In England and Scotland, little beside burnt clay pipe or tile is used to remove any excess of water from the subsoil. Land treated in the way indicated, has, when re-seeded for pasture or meadow, produced three times more grass and hay than before.

Mr. Bell said, (at the meeting above referred to) "Farmers do not want an herbage which stock would eat rather than starve, that will not pay; they want an herbage which stock relish, and which fatten them and add to their weight." Grass that grows on wet ground, is always of an inferior quality.

Mr. B. said "there was another kind of land which he would plow out, land with a thin soil and a wet bottom. He would begin by draining such land thoroughly; plow it, it needs no paring; take a crop of oats, give it a covering of lime; fallow it again, sow in wheat, and afterwards lay it away in grass."

We regard the above as excellent advice. In this connection it is proper to inform the reader that Mr. Harrison said that "he had great experience in plowing out land, and he had always observed his crop weaker where he had pared and burnt than where he had plowed in the turf."

The condition of soils is so unlike, even where externally they resemble each other most perfectly, that one man's experience flatly contradicts the experience of another.

S. W.'S NOTES FOR THE MONTH.

Potato Rot.—Doct. Lee, in the last Farmer, says that to his mind, "There is no more mystery about the potato rot, than there is about an unripe frost-bitten pumpkin." It is humiliating to me to be obliged to dissent from the opinion of a man from whom I have already learned so much; and the simple fact that he is at issue on the subject of the potato disease, with most other practical and scientific men, would hardly suffice to shake my faith in his position, did not the sober lessons of both experiment and experience prove that he must be in error. If, as he asserts, the rot is owing to the constitutional strength of the plant being impaired by the exhaustion of the soil—bad treatment—why is it that the malady has been so universally prevalent, at the same time, in the old world and the new, on highly manured land and on poor land, in the new states, on new lands, and on the worn land? Because the potato seed taken from our diseased region to the alkaline, volcanic soil west of the Rocky mountains has there produced sound tubers, the Doctor infers that on any soil in like condition, sound potatoes may be grown. But facts show that salt, plaster, unleached ashes, and the most liberal application of well-rotted animal manures, with the best of tillage, have failed to arrest the disease. On Flickinger farm, in Fayette, potatoes were planted last year on a ridge of pebbly clay loam, which had just been cleared of its heavy maple, bass, and whitewood trees, a heavy coat of virgin mould was plowed in, the potatoes planted had been grown on a sandy soil and were free from rot; still the vines died very early, and nearly the whole crop was lost. On the best clay loams in Fayette, on old sward with manure plowed in, every crop of potatoes has been almost an entire failure—no matter how rich the soil or how careful the cultivation. Strange as it may seem, the potato plants on the poor, sandy plains in Waterloo and Junius, have been very little affected by the rot, although the yield is small. Near this village, on six acres of light, sandy loam, never before planted with potatoes, potatoes were planted last year by JOS. WRIGHT. He manured with well rotted manure, ashes, plaster, salt, &c., and had a great yield of large potatoes, but one-third the crop rotted, leaving about 250 bu. of sound potatoes to the acre—a sufficient proof, and so far in favor of Doct. LEE's theory, that good manuring and culture will do much towards overcoming the disease, on a dry sandy soil.

OUR COUNTRY.—NAPOLEON once said that these United States exhibited the simple manners of early Rome, with the luxury of Rome in its decline. At no period of our history, has this remark applied with such truth as at present. If it is astounding to see the rapid strides that luxury has made in our great commercial metropolis, even within the last brief year; it is not less remarkable to note how very fast it is creeping into the interior. How often have I heard a farmer, in the midst of the annoying disturbances of his present social position, sigh for the primitive simplicity of his early log-house life. The day was when the household imported luxuries of the farm were purchased by the *gute vrow*, with the avails of her industry—the tow cloth, the home made flannel, woolen socks, dried fruit, (which included peaches, plums, and apples,) the *churnings* and the eggs. The prudent farmer who "*owed on his land*," had then a good excuse for appropriating all the avails of his corn and his cattle to the liquidation of the mortgage on his farm; and his wife, with praiseworthy self denial, sets herself to work to earn her own pin money. But, as the French say, all that is changed now. The spinning wheel and the loom, once the never-failing, and I may say precious, appendages of the farm house, the badges of its industry, its simplicity, and true economy, more common forty years ago than a carpet on the floor, are now consigned to the tomb of the Capulets! The farm is now paid for, and the lord of the soil can no longer plead exemption from domestic taxation. The wheat, the Indian corn, and the pork, are now fairly assessed by the wife, the sons, and the daughters, that they may adorn themselves and the house, to the delight of their own eyes and to the critical approval of the eyes of others. 'Tis true that with commendable industry the fruit is still cut up and dried, and the churnings are as large as ever; but in the round sum now required for family expenses, these things are like the drop in the bucket. But the salvo is that industry does not flag; the time that was spent at the wheel and the loom, is required in the now multipled duties of the *menage* and the increased claims incidental to fashionable civilization. Still no other class of our people are so little liable to exceed their income, as the farmers. Their self-denial, if not perfect, is always respectable. While our manufacturers besiege Congress yearly, clamoring for a bounty on their products, in the shape of a protective tariff, to enable them to flourish and live *comme il faut*, the farmer sees fine Mestizo wool imported into the country, under a nominal duty, without a murmur; the idea of living on any other industry than his own, perhaps never entered his head. His physical training, his industry, his economy and self-denial, overcomes all competition, and he is enabled to rejoice in a self-sustained manhood that is truly respectable.

NEWSPAPER INFLUENCE.—It is said that every man, woman and child, of a reflecting age and sound mind, is brought under the influence of journalism every twenty-four hours. To be convinced of the truth of this assertion, only so far as relates to agricultural papers, talk with a *soi distant* farmer who reads nothing, and he will speak of many improvements in manuring and tillage that he has orally learned from his reading neighbor; but only compliment him with being under the influence of *book farming*, and he will deny the charge as though it reflected on his manhood; he is like the infidel who denies christianity, while he is ashamed to be found acting out of the pale of the christian morality. Far more excusable is pedantry in the reading man, than the senseless pride of truth-hating, marvel-loving ignorance.

POTATOES AGAIN.—Since writing the foregoing, I have seen JOSEPH WRIGHT. He said that about one-third of his crop rotted; that the other two-thirds averaged considerably more than 250 bu. to the acre, large sound potatoes. Twenty-five two horse loads of soap boiler's ashes were applied to the acre, with as many more loads of well-rotted stable manure. He is decidedly of the opinion that the *ashes alone saved the crop*, as where the most ashes were found in the hill, the potatoes were the largest and best. He sold his *Mercers* for five shillings a bushel, and the balance of his crop to a shipper, this spring, at four and sixpence a bushel.

TILE MACHINE.—In this number of the Farmer will be found an advertisement from Waterloo, of the improved Tile Machine. Such is the demand for draining pipe and tile, this spring, at WHARTENBY'S Pottery there, that his large stock of ready baked tile is already exhausted. The price averages about one shilling or thirteen cents the rod.

In the last Farmer a writer who sports the cognomen of "Anti Humbug," seems yet to lack that equanimity and comprehensiveness of mind, without which the critic himself is little better than a pragmatical "humbug." That article of JOSEPH HARRIS, which he so opprobriously assails, has been pronounced, by some of our best wheat growers, (and there are none better on this side of the Atlantic,) to be the best communication from a scientific practical farmer that has appeared in the Genesee Farmer for many a day. Mr. HARRIS does not condemn green crops as manure. He is undoubtedly an advocate for the system of manuring with green clover to a certain extent, urging only the necessity of keeping more stock, and making and applying some of the nitrogenous manure of the stable, as indispensable to the maximum yield of all cereal grains, after the soil has been so long worn without other manure than green clover.

S. W. has always, in his articles to the Genesee Farmer, held up the importance of the clover plant as a medium of manuring. Its long tap root acts as a subsoil plow to bring up the unexhausted pabulum from below; and then its ample leaves and lateral branches also collect and organize nutriment from the atmosphere. But facts are stubborn things. I did say, and now repeat, on the authority of some of the best wheat-growing farmers of Seneca, that after a long course of manuring with clover alone, their crops of wheat have sensibly and gradually diminished, both in quantity and plumpness of berry ; but that when only a little barnyard manure was superadded, the gain in yield and quality of wheat was very perceptible.

But **Joseph Harris**, who has served under Mr. **Lawes**, the greatest experimental farmer in England, will not probably be in the least jostled from his position by this discourteous charge of introducing "exploded transatlantic dogmas." I have no spleen to indulge against "Anti Humbug." He holds a well practiced pen and may yet arrive at an experience that will teach him to be less hypercritical. I hope he will continue a contributor to the Farmer and to give the results of all his experience in rural economy, in which his love of truth's triumphs may shine forth to the discomfiture of all ill-directed spleen and preconceived error. If, in *my sere and yellow leaf*, I felt an impulse to glory in my own knowledge of rural economy, it would be at once dissipated by the sad consciousness that our best practice in growing plants, at the present day, is still encumbered with doubt and uncertainty. Farming is still far behind many other arts, and the idea is humiliating that the present theory and practice of rural economy is to be referred to by the yet unborn, as belonging to a wasteful, improvident and barbarous age. S. W.—*Waterloo, N. Y., May*, 1851.

TOBACCO CULTURE.

(Continued from page 107.)

I have used guano with some success. In the spring of 1846 I applied 300 lbs. of African guano, (at a cost of $34.50 per ton) to the acre ; it produced a fair crop of tobacco, as good as the average crop. I used plaster with it, a bushel to the acre. The guano was applied in misty weather, ploughed in, the land prepared, and planted. In the fall I sowed the land in wheat,—the crop was quite a satisfactory one. In the spring of '47 I seeded clover on the wheat,—it took remakably well, and in '48 I had a fine crop of clover on the land. In the spring of '49 it was prepared for corn, and the crop on it at this time shows the most decided effects of improvement. I am therefore of opinion, that guano may be used to advantage as an improver for the growth of tobacco, as well as wheat, and corn crops, &c.

The opinion is very prevalent that the effects of guano after the first crop is scarcely perceptible, and not at all to be relied upon. This arises from the fact that so small a quantity is applied, that the first crop appropriates so large a portion of its fertilizing qualities, that little is left for the succeeding crops. If small quantities of any other manures are applied, I am inclined to think that a similar result might be expected. I am sure the wisest economy in any and all manures is to lay it on plentifully, as it ensures good crops and permanent improvement, with judicious management in the rotation of crops. After tobacco should follow wheat, then clover.

It is important in the preparation of land for tobacco, that it should be well plowed, and that as early as the weather will permit. The first open weather in February should be availed of, to break up the tobacco land. The subsequent frosts will in a measure diminish the number of worms which cut off the young plants when first set out. I have heard of salt being used successfully, sown at the rate of 2 bushels to the acre—I have never tried it. The other method I have tried and found decided benefit from it.—The land being plowed in February should be rolled down so soon as the frost is out of the ground—it should be checked off with the plow that the manure may be equally distributed. The manure should not be permitted to remain on the surface, but should be turned under about the depth of three inches, and the land rolled down compact, and so remain until the leaves of the tobacco plants become as large as a dollar, or an inch and a half in length. It is then time to begin getting your land ready for planting, as with seasonable weather, the plants in a week or ten days will be fit to set out. The land should be thoroughly plowed, raked, and rolled, and reduced to a fine tilth, and then laid off, if for hills, 30 inches each way, to make fine tobacco, or 3 feet if it is desired to make large tobacco ; if for drills, they should be about three feet apart, and the plants about 20 inches apart in the drill. So soon as the plants are large enough to set out, (which is when the leaves are from 4 to 6 inches long) the first rain they should be transplanted, the earlier the better. When the plants have taken good hold on the soil, they should be weeded, which is to scrape off the surrounding surface of the hill or drill so as to destroy the young weeds and grass that may be putting up. The land should be kept mellow by the plow or cultivator until the tobacco plants are nearly grown, that is, until the land is well shaded by the plants. The hoe should be used at any time grass or weeds are discovered near the plants, which the plow cannot remove, and also to put dirt to the roots of the plants, where they have been kept exposed, either by the plow or cultivator. The preference between the plow and cultivator must be determined according to the soil, season, and locality. I would prefer, (all things suiting,) the use of the cultivator, but in seeding the tobacco, and in wet seasons, the plow is necessary. The hoe at all seasons indispensable. When the tobacco begins to button, or put forth the seed-head, it should be topped ;—the plant usually indicates the point of topping, having two leaves nearly the same length, at the place where the top should be taken off. The number of leaves that should be left on the plant, depends upon the time of topping, the growth of the plant, and the richness of the soil, from 16 to 22 leaves are the usual number ; less would make the tobacco coarse, more might make the leaves short. I usually top and sucker with the hand — knives might be used if desired. The suckers soon make their appearance after topping, and when 3 or 4 inches long, should be taken off, as they draw from the stock juices that belong properly to the leaves. This operation of suckering has to be performed as often as necessary—twice is generally sufficient, though sometimes 3 or 4 suckerings are required, before the plant is ripe.

Many are the enemies of the Tobacco plant ; the fly attacks it in the bed, and sometimes sucks out its juices after it is set out, and it perishes. The ground worm sometimes in armies attack the beds and blight the hope of the planter by a total destruction of his plants ; and when set out, they are ready deposited in the soil, to commence their work of destruction. Freed from all the above enumerated pests, the novice would suppose his prospects bright for a crop ;

his lands well manured and well set in plants, the promise of a luxuriant growth full before him, when the tobacco fly appears. He deposits his eggs upon the leaves, and multitudes of worms are hatched and enter life feeding upon the plant. The egg is about the size of a pin's head, deposited upon the under side of the leaf; at first, the worm is very small, but so rapid is their growth that in a few days they become three or four inches long, and most destructive. They are the greatest gormandizers in the known world, eating more than several times their own bulk of green tobacco daily, casting off their old skin as it becomes too small, assuming a new one; large enough to gratify their insatiable appetite. When these pests become abundant, the planter has his hands full; constant attention is requisite to stay their progress, and sometimes crops have to be cut before they are fully ripe, to save even a portion of what these *horn worms* have left. The best means of preventing their ravages, is to examine the tobacco and destroy the eggs. Every leaf should be carefully examined. Turkeys, and poultry generally, are great aids in keeping under the horn worm. Kept in the field a few days, and regularly fed before being set to work, (on corn or tail ends of wheat) they become fond of their employment, and seem to delight in the amusement which their daily wanderings over the tobacco field affords them.

The time for cutting tobacco must depend upon the time of planting, the soil, and season, and much upon the cultivation. If planted by the middle of May by the middle or last of August it should be ripe, and when ripe, cut. The appearance of the tobacco is the best guide by which to be governed in cutting. The color changes, and it becomes of a yellowish-green, and sometimes spots when very ripe. It is better to cut it when well ripened, as it cures better. I use a knife for cutting; the stalk of the tobacco is split, and then cut off near the ground—it is then hung on sticks about 4 feet 4 inches long, about 6 large plants on a stick, and the number increased if the tobacco is small. The knife used for cutting, has three sharp sides, and is fixed in the end of a staff, which is about 15 inches long, and has a handle at the opposite end.

It is held perpendicularly when spliting the stalk, and then the stalk is cut off by either of the sides that it may be most convenient to use. Some cut the tobacco without splitting the stalk, and use a spear in hanging, by which the stalk is pierced; the spear is placed on the stick by means of a socket, and the tobacco passes over the spear on to the stick. I have heard Gen. Wm. Matthews, of Charles Co., speak veay favorably of this method. I have never tried it. He is a gentleman well worthy of credit, and would be sufficient authority to justify planters in trying the spear, as used by him, in hanging.

When the tobacco is hung on the stick, it is either put on a scaffold, in the sun, or hung in the house, if it is desired to cure the tobacco red; the scaffold should be used if yellow tobacco is desired; it should be housed immediately it is taken from the field. If it should be put upon the scaffold, care should be taken that it should not be caught in the rain after it has begun to cure. If house room is plenty, I would prefer hanging in the house, as it saves one handling; if scarce, scaffolding is best, as the house will hold more when partially cured in the sun. The sooner tobacco is stripped after it is cured, the better; and when stripped, should be very carefully handled, so as not to break the leaves. The stripping is done by hand; it would be a matter of great saving of labor, if it could be done by some sort of machine, constructed for that purpose. I, however, doubt its practicability. When stripped, the tobacco should be carefully packed away, if in proper condition; if not, it should be again hung on sticks until such time as it will bear packing down. If put down too wet, it will mould; if too dry, it breaks and much disfigures it. The size of hogsheads, as fixed by the act of the Legislature of Maryland, in 1828, ch. 164, seems to me reasonable, to wit: 50 inches in the length of staves, and 76 inches in diameter at the cross and bilge. Oak is perhaps as good wood as any for materials for hogsheads; pine will answer very well, and gum or poplar, if sawed, would answer for staves; the hoops should be of red oak.—All should be perfectly dry before packing the tobacco in them.

As to the best mode of prizing, there is a great variety of opinion. If it is desired to use great expedition, the horizontal screw prize, perhaps, would be preferred; if it is desired to pack neatly and safely, and, at the same time, with ordinary speed, the beam and lever prize, with a swinging weight, that can be increased or diminished at pleasure, would be recommended. Mr. Rodolph M. Gibson, of St. Mary's county, has obtained a patent for prizing tobacco, which I have heard highly spoken of, and which from the high recommendation I have heard of it, I have no doubt is well worthy of public attention. I regret that I am not sufficiently acquainted with its construction to furnish a correct idea of it in detail. It is, however, very simple.

I have given a plain statement of the culture of tobacco. I have studied brevity, even, perhaps, at the expense of perspicuity, and yet this communication has far exceeded the limits of my original design. My object has been to impart to others the benefit of my own experience, to instruct, not to amuse them. Having given my own opinions and practice, I should be much gratified if others, of more experience and practice, would favor the public with communications of more practical utility. I desire no one to adopt any opinion or suggestion of mine, except so far as his individual benefit may be thereby promoted.

"Whether it would not, under the present circumstances of the tobacco trade, be to the interest of the planters to decrease the quantity grown, and introduce the culture of other agricultural products, and if so, of what kind?"

I propose a brief examination of the above question, and shall then close this communication. I have always thought that the planters would best consult their own interests by limiting the amount of tobacco grown, and improving the quality, thereby increasing the demand, and consequently the price. This view seems to be entertained by most intelligent planters whom I have seen, nearly all of whom have reduced the quantity grown, and many have abandoned its culture altogether. Those who have soils adapted to the growth of tobacco, may, I think, with great propriety, continue the culture with the very confident hope that good tobacco will (after the excess of over production of former years shall have been exhausted) pay a fair remuneration for its production. This must soon be the case, as the very reduced prices have so diminished production, that the demand must greatly exceed the supply, and prices must advance. One or two hogsheads, at the most, should be the limit to the hand, and that of a greatly improved quality. Those of our planters who have abandoned the culture of tobacco, have greatly improved their farms and added much to their corn and wheat crops.

The spirit of improvement seems to be abroad in our land, and I know of no more assignable reason for it than that many persons who had predjudices against book farming, have become daily readers of the 'American Farmer'—*the renovator of their minds, the fertilizer of their soils, and the great team-horse of their agricultural prosperity.*

I know of no other agricultural product than such as are raised by our farmers, that could be profitably introduced. A diminished crop of tobacco would enable the planters to raise more corn and wheat, and could any assurance be given of a remunerating price, I would recommend the experiment. The foreign demand can seldom, if ever, equal the supply of our breadstuffs, and except in cases of such unexampled famine as Europe has been visited with in the last few years, her consumption of our grain crop must be very limited. The chief reliance, then, of the farmer, must be in the home market. That we know is not sufficient to consume a moiety of our surplus productions. What, then, is to be done? My opinion as a Marylander, as an American, as a philanthropist, is, that we must increase the number of consumers until they shall bear a fair proportion to the number of producers, and he who shall be mainly instrumental in producing this result, will entitle himself to the appellation of the benefactor of his country.

PRODUCE OF SEVENTEEN ACRES

MESSRS. EDITORS.—I send a statement of the product of seventeen acres of land cultivated by ARTHUR CULLUM, Esq., one of your subscribers here. I may add Mr. CULLUM is not a professional farmer, but one who appropriates, with an amateur's devotion, his leisure hours from other business, to agricultural pursuits. The farm is a hill side, with a clay subsoil, and a southern exposure.

Product of 17 Acres cultivated by A. Cullum, Esq., Crawford Co., Pa., 1850.

25 Tons of Hay, at $5 per ton,	$125,00
55 Bushels of Wheat, (raised on sod turned over in in August—yield therefore less,)	55,00
76½ Bushels of Barley,	53,00
75 " Shelled Corn,	30,00
60 " Potatoes, (the crop partly blighted,	15,00
40 " Ruta bagas,	8,00
20 " Oats,	5,00
Corn Fodder equal to two tons of Hay,	10.00
	$301,00

On another part of farm Mr. C. raised on six acres, 213 bushels of wheat, of a variety known as the *soft white*. A. HUIDEKOPER.—*Meadville, Pa., Feb.*,

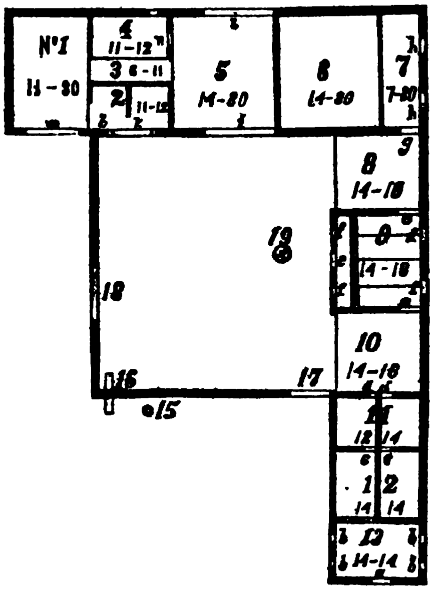
REMEDY FOR LICE ON COLTS AND CATTLE.—Take white oak bark, boil in water, making a strong decoction, and wash the animals on the back and sides. In twenty-four hours the lice will be completely tanned. S. L.—*Piffard, N. Y.*, 1851.

TO RESTORE PORK.—In warm weather, the brine on pork frequently becomes sour and the pork tainted. Boil the brine, skim it well, and pour it back on the meat boiling hot. This will restore it even where it was much injured. S. L.—*Piffard, N. Y.*, 1851.

Country Residences, &c.

PLAN OF A BARN.

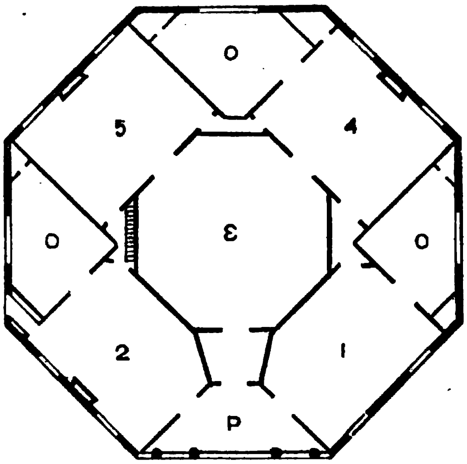
MESSRS. EDITORS:—I herewith send you the ground plan of a Barn, which I think meets the wants of a very large class of your readers better than any I have noticed among the many excellent ones presented in your valuable paper, with the exception of the one presented in the February number. However all farmers cannot have side hills to build upon, of which the writer is one. Thinking my barn combines convenience with good taste, to some little extent, I place the within plan at your disposal.



The main building is 30 by 50 feet, with 14 feet posts. No. 1, wagon house. No. 2, horse stable for one team; the black dots are slats for the rack, which are put up perpendicular; a very wide board is fixed in the passage, No. 3, against the lower part of the rack, and the upper part of the board is two feet and a half from the rack and held there by two cords, one at each end. No. 4, grainery. No. 5, barn-floor. No. 6, bay for grain. Over the wagon house, stable and grainery, I have a tight floor, and there I keep my hay. No. 7, a place to keep sheep. No. 8, open shed. No. 9, four stalls to keep cows, or two cows and an extra team of horses, with rack, mangers, and a passage three feet wide to feed from Under this stable is a tank to receive the urine and wash from the barn-yard. No. 10, open shed; over this shed I keep hay for the cattle and sheep. Nos. 11, 12, and 13, hog pen; No. 11, sleeping apartment; No. 12, yards; No. 13, feed house; overhead a place to keep corn. The black dots are iron rods put on the front side of the trough. There is a partition through the center of the yard and sleeping apartment, so I can keep four or six porkers on one side, and a breeding sow on the other. Over No. 11, hen house. No. 15, pump. No. 16, water trough. Nos. 17 and 18, gates to barn yard. No. 19, a drain to the tanks. *a*, door; *b*, *b*, *b*, *b*, windows; *c*, *c*, swinging doors; *d*, *d*, doors; *e*, *e*, *e*, doors; *f*, *f*, *f*, *f*, windows; *g*, door; *h*, *h*, windows; *i*, *i*, doors: *k*, door; *l*, sliding door; *m*, door; *n*, door. OBSCUR

AN OCTAGON HOUSE.

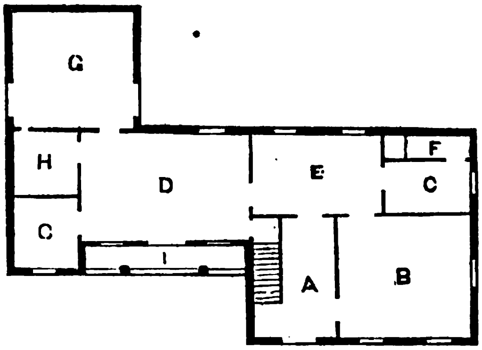
Messrs. Editors :—I enclose the accompanying plan of an octagon house which I think very convenient for farmers' use, though somewhat unfashionable and uncommon in this part of the country, yet the form contains some advantages not perceptible at the first glance, one of which is that of enclosing more space, with less wall, than the square form ; another, is the more solidity of such form, and less liability to be racked with high winds ; and last, though not least, is its compactness, and short distance from room to room. The cost would be considerable less than for a right angled house of the same number of rooms of the same size.



PLAN OF GROUND FLOOR.

1, Parlor, 18 by 14. 2, Sitting room, 18 by 14. 3, Dining room, 20 by 20. 4, Square room or Library, 18 by 14. O, O, O, Rooms with closets attached. P, Triangular porch, passage, &c.

PLAN OF A CHEAP AND COMMODIOUS FARM HOUSE.



Eds. Gen. Farmer :—Noticing that you devote a portion of your valuable paper to this part of general improvement, in favoring the wants and lessening the expenses of farmers, especially in that branch of improvement which is so much engaging the minds of a great portion of the public at this time.—We are, at this age of improvement, generally selfish in regard to our pecuniary affairs. In erecting our farm buildings, it is a desire, and an interest, and at times necessary that we should use the utmost economy to curtail our expenses until we all get the upper hand of poverty.

Influenced by these just considerations, I propose to give to your numerous readers, the following handsome, convenient and cheap plan for a farm house.

By the preceding ground plan, you will see it presents the upright part 22 feet front, and 27 feet back,—the end to the front. To the left is a wing 21 feet front, 20 feet back, with wood-house 20 feet still back, which gives a front view of 43 feet by 40 feet back. The rooms above are to be one front room, with closets on each side, two bed rooms back, with closets, which at first glance will be found to be very handy and convenient. Chas. H. Hobart. — *Yatesville, N. Y., May*, 1851.

SEED POTATOES.

Messrs. Editors.—Having seen the subject of seed potatoes noticed in your valuable paper, the Farmer, I thought I would give my experience about them. My father taught me by practice that large ones were always to be prefered—a practice I followed till necessity induced me to try small ones ; and I can now say with a good deal of confidence, that small potatoes are fully equal to large ones. My experience has been thus : I have planted one part of my patch with large ones whole, and part with large ones cut in pieces, and a part with small refuse ones, and I could discover no difference, except that those from the large whole ones were more nearly of *one size*, the yield being about equal, where the ground was equally good. So fully satisfied am I, that I usually eat or sell the large potatoes, and plant little ones. In fact the greatest yield I ever had was 65 bushels from a half bushel measure three times even full. But I took a different plan with these, which was to cut them about four weeks before planting, and spread them in a dry airy place and let them dry. This practice I think, will increase the yield, and pretty certainly shorten the time to maturity. However, each one can easily test the matter for himself. By the by, while I think of it, will you, or some one, through the Farmer tell me when is the best time to cut under-brush to prevent sprouting up from the root again. A Subscriber.—*Allen, Ind., March*, 1851.

SEED POTATOES.

Messrs. Editors :—Your correspondent, "A Subscriber," in your April number, questions the correctness of my opinion and advice—that small potatoes answer well for seed. It does not accord with his experience. He does not state any experiment where the comparative results of small and large seed are ascertained. But I presume he has made such experiment. He states, however, an experiment made with large seed only, which I think interesting and worthy of further and full investigation. The eyes from the large end and from the middle, and from the small end of the same potatoes, were planted in separate rows, and the product of the seed taken from the large end exceeded that from the seed of the small ends, at the rate of one and a half tons (say 36 bushels) per acre. Now I confess that I am surprised, and wholly unable to account for this result. The fact I admit, because he states it ; but I can see no reason why it should be so. And if this is to be an uniform fact, it is important that it should be known, for it would be better to cut off the small ends and throw them away and plant only from the large ends. The difference in the product would repay, four-fold, the loss of the portion thrown away. I deem it, therefore, a matter of much interest to have the experiment repeated, in order to ascertain whether the results will be uniform, or whether in this case it may be considered fortuitous.

I consider your correspondent as suggesting, indirectly, a reason for this result in the opinion which he expresses, that the eye or seed at the large end is more mature and perfect than at the small end. I see not the truth of this position, nor the force of this reason. How is it ascertained that the eye at the large end is mature and perfect, while that at the small end is not equally so? And how does it appear that on a potato that is ripe, whether large or small, all the eyes are not equally matured? The fact that they are not, may be conjectured and assumed—but is it really so? And if it were so, provided they were all sufficiently ripe to germinate, why should there be a difference in their products? I make these remarks, not to controvert the suggestions of your correspondent, but to induce thorough investigation into this subject.

Now as to small seed. Influenced by early education, and the force of example, I should not risk them but for the results of actual experiment. Nor would I be induced to confide in them, after one experiment only. But having tried them two years, and on different soils, embracing different degrees of richness, and different characteristics, and finding, uniformly, the product of the small to be equal to the large, I have given the opinion that it would be safe to hazard them as a field crop. This opinion will govern my practice the present season. Should further experiments produce a different quotient, and prove that uniformity in the results is not to be depended upon, then there will be reason to discontinue the practice.

E.

THRESHING OATS.

Messrs. Editors :—As there has been two articles written on this subject, I suppose that I cannot say anything that will be instructive in relation to it; nor do I wish to; but I would like to give my opinion in regard to H. L. E.'s threshing 400 bush. of oats with his machine, with only four men and two horses. H. L. E. has one man to feed, one to untie the sheaves, one to take the straw, and one to take the grain, without chaffing, which would make about 800 bushels, chaff and all—a pretty good day's work for one man. But he might do it. One man might feed the machine; but he cannot untie and feed. Nor can one man throw the sheaves from the mow and untie. One man might get the straw from the machine, but he cannot stack it nor pitch it on the stack. H. L. E.'s horses might go without a driver, but all horses will not. Now if H. L. E. had said eight men instead of four, and an extra span of horses to change with, we might come to the conclusion that he had seen service; but as it is, we think that he is better at puffing than he is at threshing. Honest.—*Reading Center, N. Y.*, 1851.

We leave to others the question of economy, merely remarking that we have often seen these machines in operation, but never saw any necessity for a driver.

A FEW THOUGHTS FOR FARMERS.

Messrs. Editors :—I take considerable interest in agricultural science and would like to suggest a few thoughts, to which you may give such prominence as you think proper.

I have observed among farmers, an almost endless diversity of opinion as to agricultural practice.—Every other individual has a different method, and all have full confidence in the superiority of their own ways. For example, in endeavoring to avoid the destruction of potatoes by the rot, one believes in digging early, and another goes for leaving them in the ground as long as possible; one succeeded best by spreading them upon his barn floor, and another by putting them in the cellar and covering them with ashes. And so, in relation to almost every part of agricultural practice, farmers differ in some points, and often to the extent of direct opposition. The consequence is, that agricultural experience is an exceedingly unreliable guide, and the science itself is perplexed with confused, if not contradictory opinions.

The course of this diversity, it appears to me, is two-fold. With the great mass of farmers it is the product of limited information. They read but little, and of course base their conclusions upon their own narrow views and vague impressions, and as these differ in the case of different minds and circumstances, the conclusions themselves must be equally diverse. Among the better class of farmers, the diversity of opinion springs from imperfect observation. The farmer but partially notices the first facts of the case in hand, and trusts to his memory for the preservation of these, so that when he arrives at the final result, his conclusions are based upon partial data, and thus a wide margin is left for error, and consequently diversity of opinion. For example, the farmer may have carefully and correctly noted the character of the soil, the mode of preparation, the quantity of seed and the time of planting, and yet have neglected a dozen points that might very materially change the great result and thus give ground for a different conclusion.

Now, as to the means of removing this diversity of opinion, and settling the facts of agricultural practice upon a certain basis, so that the farmer's experience shall be a safe guide and a valid ground of belief, it will be seen at once that, in the first case, resort must be had to increased knowledge. When the farmer has, through the various channels of information which are open to him, thoroughly informed himself as to the present state of agricultural science, he will be less likely to be governed by crude impressions and limited views. In the second case, and this I regard as the most important to be noticed here, the evil must be removed by cultivating habits of thorough and systematic observation. The intelligent farmer might accomplish this by keeping *a farm-book of facts*, in which he should enter in regular order, every fact in his practice that could in any way afford data for sound conclusions. He might enter as follows, or in some tabular form, facts like the succeeding, in relation to a certain crop:

The Field.—1st, its exposure; 2d, character of the soil; 3d, its condition; 4th, manner of preparation.

The Seed.—1st, its character; 2d, the quality; 3d, the mode of preparation for planting.

The Planting.—1st, the precise time; 2d, the manner; 3d, its character as proven by time.

The Weather. — 1st, the weather preceding; 2d, the weather immediately succeeding planting; 3d, its general character accurately observed during the growth of the crop.

The Growth.— 1st, noticeable peculiarities; 2d, dates of different stages; 3d, the weather connected with such stages; 4th, general characteristics of growth.

The Harvesting.—1st, time; 2d, manner; 3d, condition of the crop; 4th, the weather; 5th, general treatment.

Produce.—1st, quantity by actual estimates; 2d, quality; 3d, par value, &c.

In this way, substantial data for the comparison of modes, and the settling of principles, would be obtained, and the conclusions of the former be fixed upon the firm basis of accurate and reliable facts.

Frederick S. Jewell.

POULTRY FACTS.

Messrs. Editors:—In this age of big theories and big fowls, we need facts to guide us. Therefore, I herewith contibute my mite. In most of our statistics, *all* the facts are not given, so that we are not able to form a correct judgment. I will try and avoid this error.

My fowls are of the Poland variety, full-blooded, jet black, except the top-knot, and sometimes two partly white feathers in the tail of the cock. I obtained them, originally, from the Aviary in John st., New York. On the first day of March last, I had eight hens and one cock. One of the hens had the rheumatism in her neck. I cut her head off on the 23d May, and buried her near the foot of one of my grape vines. The others were healthy and laid between six and seven hundred eggs before September, and raised twenty-four chickens. Being engaged in building an addition to my house, my poultry record was lost for a time in August, so I cannot give the *exact* number of eggs. But it will be within the bounds of truth, to say that the seven hens laid six hundred eggs between March and September, and raised twenty-four chickens. The early chickens commenced laying in November, and have continued to lay until the present time, with the exception of about 5 weeks in the coldest weather. Early chickens at maturity make much larger fowls than late ones.

The cost of keeping my hens has been forty cents per year, each. Living in a village, I keep them housed until four o'clock in the afternoon, when they have the run of a yard, and are shut up at night. I usually feed screenings, at twenty-five cents per bushel, and corn at forty-five to fifty cents. My early spring chickens weigh from three to three and a half pounds in the fall, when dressed. I have now twenty-four hens, and expect to revel in *fat* eggs all the year. You are probably aware that there is as much difference between fat eggs and poor eggs, as there is between fat beef and poor beef. E. Ware Sylvester.—*Lyons, N. Y., Feb.*, 1851.

To prevent the Bug from destroying Vines.—A small striped bug in the west, that destroys vines, is particularly troublesome in gardens, and but a few people in this country know a remedy; a small handfull of tansey pulled and placed around each vine, will drive the bugs away. A knowledge of this might save a great amount of care and vexation.—M. H. B.—*Spencer, Ind.*

VALUE OF SWAMP MUCK AS A MANURE.

Messrs. Editors.—While reading J. P. Norton's remarks on the value of swamp muck in the May number of the Farmer, it brought to my mind a circumstance (which by the way, I have related to hundreds of owners of such swamps,) that took place on my father's farm in Manchester, Conn. My father had a sand hill on his homestead, that contained from two to three acres of *drifting sand*, entirely useless and good for nothing. He also had a muck swamp near by, and he concluded to try it on his sand hill. We hauled I should think, from 100 to 150 loads of the muck to the acre, and spread it on his sand hill. This was done in the fall, and the next spring we plowed and planted it to corn, we had about ten bushels to the acre, My father therefore said he had lost his labor. I wished the following year to have the same again planted to corn, to which he objected, saying he had had enough of muck manure, I however persuaded him to let me plow and plant it. It yielded twenty bushels of shelled corn to the acre. My father then sold the farm, and the same sand hill was plowed and planted for thirteen years in succession to corn, and at the end of which time the owner and myself while passing over the same ground, then planted to corn, we concluded that there could not be less than forty bushels of shelled corn to the acre, he at the same time assured me that he had never put a single load of manure on the lot with the exception of ashing and plastering his corn and said that the crop you now see is no better than for several years past There was also a fine young and thrifty apple orchard growing on the same land, beginning to bear. Frederick Woodbridge.—*Franklin Mills, O.*

CLOVER MILL.

A Correspondent in our last number desired to be informed of the best clover mill in use — price, &c. We take the following from the Ohio Statesman, being notes made by the editor, at the Ohio State Fair. This machine received the first premium.

In the Agricultural Implement Department, a clover seed hulling and cleaning machine was exhibited by M. H. Mansfield, of Ashland, Ohio, which in many particulars is superior to any machine of the kind yet introduced in New York or the New England States. This machine will hull and clean ready for market, in a perfect manner, 5 bushels of clover seed per hour, with the power of three to four horses, which is at least 30 per cent. more than can be done by the latest improvements known in the east. In its principles it is entirely new, differing materially from any clover hulling machine, previously brought into use. The threshing or hulling part is simply a cylinder about 20 inches in length, suspended on a shaft with a 4 inch pulley to one end, to which is attached 80 spikes or rubbers in parallel rows similar to the drum of threshing machine. The concave has 128 of those spikes or rubbers, which are also set in parallel rows. The spikes are made of malleable iron, and are 2¼ inches long, and 1¼ inches wide. They are neatly fluted on each side, having ten of those flutes to a tooth, and being so arranged that the teeth of the cylinder nearly touch those in the concave. The process, it will be readily seen, is one, when the proper power for motion is applied, which will rub out the seed most perfectly, as fast as it can be fed into the machine. Those fluted teeth or rubbers each pass through a small hub in the inner part of the cylinder, and are so arranged that they are thrown back on the surface of the cylinder at the instant a stick, stone, or any other serious obstruction may accidentally get into the machine. The separator and fanning apparatus are got up on the most improved principles, and the whole machine is built with a view of combining durability with efficiency. The price of these machines at the place of manufactory is $95, being warranted to perform all that we have ventured to say in their favor.

OBSERVATIONS ON THE EFFECTS OF GYPSUM.

Eds. Gen. Farmer:—In looking over the Farmer for 1850, page 34, I found an article headed "Gypsum—its Elements and Value," in which the author has given answers to three inquiries, most of which accords with my opinion; but there is one fact I have observed that has escaped his notice, viz: that there is a certain principle in gypsum which has the power of retaining moisture of rain and dew. I have discovered that when walking through a field of clover where gypsum had been sown in the spring, when the clover is ancle high, the feet would be moistened with dew, when an adjoining field of clover, not plastered, was perfectly dry. This constrains me to differ in opinion from the learned author, where he says, "Gypsum does not, in the opinion of the writer, contribute to the growth of plants from the fertilizers which it draws directly from the air." In my opinion, this property of retaining moisture is the main cause of the astonishing effect gypsum has on plants. How it does this I will leave to science to determine. I have seen, on a dry, sunny day, when the dew on unplastered clover has been evaporated for hours, where gypsum has been sown the dew on the leaves collected in globular balls; and hence a thought struck me that gypsum was an agent in forming those balls of water, and in doing so it might have formed a thin transparent shell not perceptible to the naked eye, to preserve them from speedy evaporation by solar heat; for if one of these balls is pressed by the finger, it will appear to burst and the water to run out like the contents of an egg when the shell is broken, and sometimes it will collect again into several smaller ones. This I will also leave to science to investigate.

Another thing I have observed, which I think is in support of my position—that when I have sown gypsum in dry weather, and there has not been any rain for some time after, and consequently but little dew, I have never perceived any benefit from it; therefore I would recommend it to be sown early in the spring, as soon as vegetation begins to start, so that it may take the advantage of early rains. I have always found this way to succeed best. **Green Farmer.**

VIRGINIA LANDS.

Eds. Gen. Farmer:—I perceive an article in the Genesee Farmer in relation to Virginia lands. Being a resident there, and land holder, a few remarks in relation to the subject, might be acceptable. 1st, As to health, from the head of Tide-water to the Blue Ridge, no country can be more salubrious. The lands are moderately rolling. One-third may be natural forest oak timber, principally, one-third "old field pines," so called—that is lands that have been worked a few years and turned out; the balance in cultivation, the second growth, is invariably a luxuriant growth of pines. The manner of cultivation is, first, two crops of tobacco, then wheat and corn, alternately, for four or five years, then a crop or two of oats—then it is called "worn out." One horse, or mule, is the usual team for plowing. The soil is usually of a sandy nature for a few inches; subsoil, clay, sometimes quite to the surface. No lands are more easily improved, or retain manure longer, or with as good an effect. Clover grows luxuriantly, with a little help, and when once seeded, no after-culture will eradicate it. Wheat is generally sure, and the quality very superior, as is well known; the same of corn. For fruit of all kinds, grapes, peaches, apples, &c., particularly, it can't be beat. Never-failing springs, on most plantations, are plenty.

I am anxious for a company of northern farmers, say 100 to 150, to purchase a tract of land, of 20 to 40,000 acres, (some well improved and with excellent buildings,) within 20 to 30 miles of the principal cities and tide-water, on and adjacent to railroad and water navigation, 30 hours distance from New York by land, and 48 by water. The average price may be $4 per acre. For health, nearness to market, and genial climate, it certainly offers greater inducements, in my opinion, than any other portion of the United States.

The following may be about the prices of produce: Wheat, prime, $1.05 to $1.10; corn 70 to 75 cts.; rye, 65 to 70 cts.; buckwheat, $1.00 to $1.25; hay, $20 to $25; oats, 50 to 65 cts.;. butter, 25 cts., always; cheese, none made; cotton, 12 cts., little raised, but might be; potatoes, $1.00; Irish and sweet potatoes, $1.00 to $1.50; beans, $1.30, &c., &c. It is generally supposed that it is disgraceful for a white man to labor; nothing is further from the truth. Any that wish to inquire more particularly, may write to me at Proctor's Creek, Chesterfield Co., Va.—post-paid. **Samuel Clark, Jr.**

FRENCH AND SPANISH MERINO SHEEP.

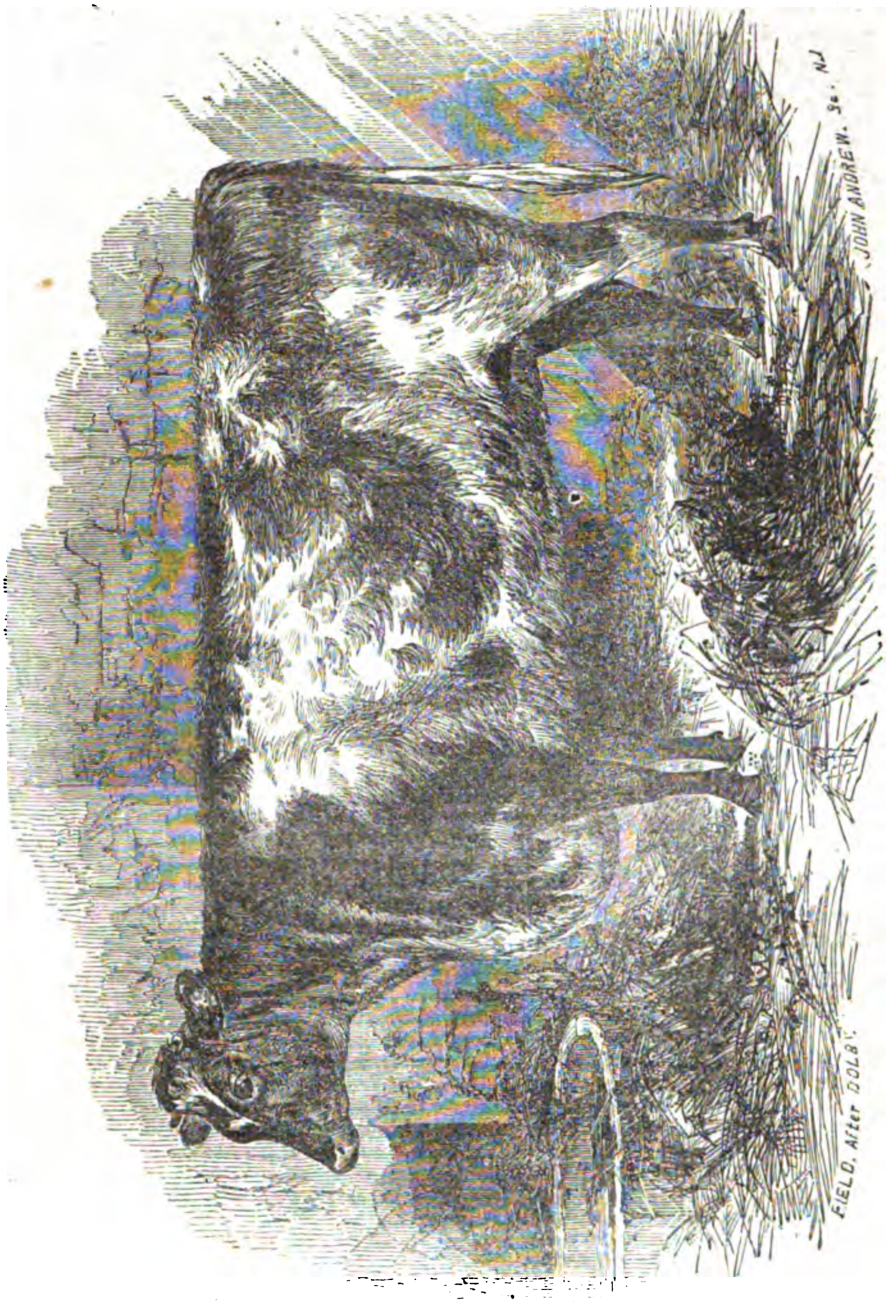
Messrs. Editors:—Having been somewhat extensively engaged for the last sixteen years in the growing of wool, and the rearing of fine sheep, I propose, very briefly, to offer to the public, through your highly esteemed journal, my views on the comparative merits between the French and Spanish Merino sheep.

When the French sheep were first imported, some four years since, I visited the flock, and re-visited it, and was in doubt whether they were an improvement or not. I hesitated about purchasing, but finally concluded to take a few and give them a trial. I was pleased with the result. I found that my Spanish sheep were improved, both in quality and quantity, by a cross from the French bucks. I now own a few of each importation made. I have recently purchased twenty-two ewes, being all but two in the hands of the importer. In addition to these, I have purchased thirteen bucks which were imported during the past winter, a part of which are for sale. The last ten ewes cost me $2250, or $225 each. For ease in taking on flesh, constitution of the animal, and weight of fleece, these sheep have no superiors, and I can cheerfully recommend them as the best among the races of fine wooled sheep. At least this is my opinion after a trial of three or four years. **Merril Bingham.**—*Cornwall, Vt., May,* 1851.

PLASTER.

Messrs. Editors:—Three years ago a piece of land (six acres) was planted with corn, the seed rolled in plaster (gypsum) and a little put on the hill, previous to hoeing, and without manure; the next spring it was plowed and seeded with clover. The next season, for several weeks previous to mowing, it could plainly be discerned, by the freshness and rankness of the clover, precisely the spot from whence came the hill of corn. In going through, we could plainly discover where a hill of corn was missing, in consequence of the absence of the plaster.

I wish to inquire whether the plaster acts on the depth of the soil, that the plowing of six inches in depth should not remove the hill, and what is the nutriment it extracts? The top soil is gravelly loam. I should like to hear from S. W., of Waterloo, or from some other correspondant. **Frederick Williams.**—*Dewittville, N. Y., April,* 1851.



SHORT-HORN HEIFER, PRINCESS II.

Winner of the first prize for yearling Short-Horn heifers, at Syracuse, in 1849; and of the first prize for two year old Short-Horn heifers, at Albany, in 1850, at the New York State Agricultural Society's Shows in those years. She was bred by Mr. Stephenson, of the county of Durham, England, and was imported by, and is the property of Ambrose Stevens, of New York.

METHOD OF GROWING MELONS.

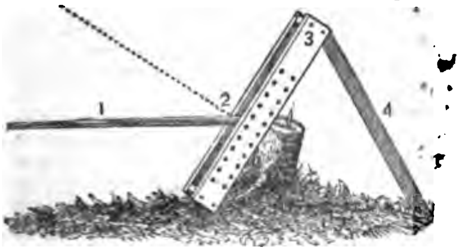
Messrs Editors.—Select the poorest, and if possible a completely barren piece of ground; the reason for which will appear in the sequel. Lay off your ground into holes 2½ or 3 feet square, in rows 8 feet by 10. Late in the fall or during the winter, these holes must be filled with manure even with the surface, and then hilled up into hills with the soil or clay taken from them. Plant the seed from the 1st of April to first of June, according to your latitude, or your desire for early or late melons. From the 15th of April to the 1st of May is a good time in the latitude of Virginia and North Carolina. To avoid the ravages of the striped bug as well as in some measure obtain the advantage of a hot-bed, I intend hereafter to make small boxes, without bottoms, but covered on the top with millinet, which will, I think, effectually answer the purpose intended, and save me much anxiety, as well as trouble in having to visit my tender vines twice a day to *bug*.

The best watermelon I have ever seen, is the Hanover, with white seed and red "*meat*." After the vines commence running, the boxes can be removed and packed away safely until another year. No work is required after the first, second, or third week, as it is disadvantageous to disturb the vines after they have commenced running pretty freely, being liable to be bruised or broken, and the ground around the hills being barren gives entire freedom to the vines to run, and the melons to ripen, without being shaded or injured by weeds or other growth. S. W.—*Virginia, April*, 1851.

A CHEAP STUMP MACHINE.

MESSRS. EDITORS.—I wish to know from you, or some of your worthy correspondents, relative to a stump machine. I have sixty acres of what we Buckeyes call barrens, — the growth of the timber on it is from one foot down to a small twig. I wish to procure a machine that has sufficient power to pull small stumps in a green state. Let me know through your valuable paper the kind most suitable for small stumps, the cost of the machine, and where it can be obtained. J. S. FUNK.—*West Liberty, Logan Co., Ohio.*

In the April number we gave a description of a stump machine. This however may be too costly and too difficult to obtain for general use. We now give a plan of another, and one that can be made by any farmer with the aid of a blacksmith. It was published in this journal some years since, and many of our subscribers have used it with advantage.



"There may be many of your readers living, like myself, on farms not very heavily timbered originally, and which have been cleared long enough for the roots of the stumps to become considerably decayed, to whom it would be some object to obtain a small, cheap and simple stump machine, which would answer their purpose as well as one more costly. In the sketch 1 is a round pole 10 inches long, 4 inches in diameter at the largest end, which is well banded. Into this is inserted a bar of iron 2 by 2½ inches, drawn to half that size at the end inserted into the pole, and 2 feet long. Near the end of this, two notches are cut, a little over 4½ inches apart. In the middle between these, a hole is punched and a link 6 inches long inserted, as seen in Fig. 2, which represents the bar, large hook to hitch under a root of the stump, a link inserted in each, and a connecting hook. The links are made of round ⅝ inch Swede's iron, the connecting hook of 1½ do.; the large hook of a bar of old sable iron 18 inches long, bent round edgewise. 3 is a frame consisting of two oak planks 3 inches thick, 8 wide, and 7 feet long pinned together at the end through a piece of 4 inch scantling, between the planks. There are two rows, 4½ inches apart, of 1¼ inch holes through these planks; the holes being 3½ inches apart in the rows, from center to center. The holes in the right hand row are one inch lower than the opposite ones in the left. Through these holes two iron bolts, as large as the holes, are made to pass for the bar or lever to rest upon.

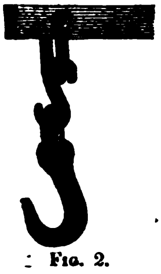


FIG. 2.

To use this machine, it is set up as seen in the figure; 4 being a board for a brace, the lever placed between the planks, the notches resting on the two bolts, and the hook hitched under a root. Now elevate the end of the lever, (which needs a short pole attached by a ring to the end of a long one,) withdraw the left hand bolt and raise it one hole higher; now depress the end of the lever and raise the right hand bolt; and so on as high as you wish. The cost of the machine was $7—iron $4, making $3. Any blacksmith and carpenter can construct one. With a team and sled and stone boat to draw the machine about, I have seen two hands, on a lot that had been cleared fourteen years, pull in a day from sixty to a hundred stumps, mostly from ten to eighteen inches in diameter. T. W.—*Ontario Co.*, 1849.

POTATOES.

POTATO ROT.—Last spring I planted several varieties of potatoes, many of them mixed in the same row and in the same hill; soil rather moist, rich, loamy, some parts sandy, clayey, &c., and some with decaying vegetable matter, as chips, fragments of bark, grass, weeds, &c., intermixed. Among the varieties of potatoes were the Sardinias, or flesh colored, the White and the Purple Pinkeyes, Mercers, Large English Whites, and several others Of the Purple Pinkeyes there appear to be two varieties—the one resembling the Long White Pinkeyes, the others more coarse and irregular in their appearance. At the time of digging, several of these last were affected by the rot, (the dry rot chiefly,) and some few of the others, more especially of those that grew amidst the decaying vegetable matter. Most of the coarser variety of the Purple Pinkeyes, which at the time of digging were apparently sound, have since been destroyed by the same cause, the dry rot.

SEEDLINGS.—A few years ago I sowed some potato seed, and the result not proving satisfactory, I repeated the experiment last spring. The season was cold and backward, and the plants did not come forward till late. I then transplanted about a dozen of them, which did very well, although they were late, and were overtaken by the frost while yet green and thrifty. I dug them, however, and found among them four or five distinct varieties, though only two or three appeared decidedly new. Some were long, white, smooth, with shallow eyes; others similar in size and shape, and of a beautiful, though not deep, red; the largest over three inches long and three in circumference; others similar in color, but differing in shape, the largest over three inches long and about five in circumference, smooth, flattened or compressed; others white, round, deep-eyed; and others very pale flesh-colored; &c. The greater part of them were small. I have kept them in an open box in a cool and tolerably dry cellar. On examining them January 10th, I found a large number of them affected with the dry rot. The kinds described above are least affected. It is my intention to repeat the experiment. H.—*Down East, March*, 1851.

Horticultural Department.

EDITED BY P. BARRY.

"I can appreciate the beauty of a fine field of wheat, corn, or clover, and I like to see fine horses and cattle, but as for your trees, and shrubs, and flowers, I know little and care less." This is a very common way for men to talk who have been born in the country, and whose whole lives have been spent there, surrounded by trees, shrubs, and plants, the most beautiful in the world. To such people, the country has really no beauties, save those that contribute to their riches or worldly prosperity. They seem to feel that it would be inconsistent for a good, thorough working farmer to give some attention to the spontaneous productions of his woods and meadows—to study, and become acquainted with the names, characters, and beauties of the trees, shrubs, and plants, that nature has planted and reared for him. Is it so? Is it really necessary, in order to be a good farmer, to avoid all intercourse with nature, except in field crops? We know that is not so; for some of the best agriculturists we ever knew, practical, hard working men, too, were as keenly alive to the natural beauties of a landscape, and to the individual beauties of trees and plants, as though they had nothing else to do but cherish and cultivate that taste. They knew the locality of every noble or remarkable specimen of forest trees in all the country about, and the favorite haunts of the most rare and beautiful wild flowers within many miles. They could tell in a moment how many species of oaks, elms, maples, &c., were indigenous to their forests, with as much accuracy as a good fruit grower could tell the varieties of fruit in his garden or orchard. To such people country life has a charm that sweetens and lightens the burden of labor, and they, and their family, are noted for their superior taste and intelligence. He only, who has a knowledge of trees and plants, and who has learnt to appreciate their beauties, can enjoy the pure pleasures of the country. In the spring of the year the budding and blossoming of the various species are noted from day to day with a lively interest, and not for their beauty alone, but as indicative of the earliness or lateness of the season. So are the periods of the maturity of their seeds, and the autumnal changing and falling of the foliage. These are the interesting and beautiful signs of the progress and change of season, that every man, and woman, too, living in the country, should, by no means, be insensible of.

We do not expect that anything we may say, now or hereafter, on this subject, will awaken those who have grown gray in their indifference to the productions of our woodlands, but we do hope to stir up the *young*, whose habits of thought and action are not yet formed, and who have not become wholly possessed of the one idea—that of money making—which blights and destroys all the finer and better feelings and tastes. They have more leisure than their fathers had, education is more general, science and taste are both uniting with labor in all parts of the world, so that working men will not be mere machines, performing their day's labor as an ox or a horse. "The cultivation of the soil" is no longer the farmer's motto, but the "cultivation of the soil and the mind,"—the *mind* above all.

But the native riches of our woods are not neglected by farmers or country people alone, they are neglected, unjustly, by all classes. There is a great taste throughout our country, and especially around our cities and villages, for planting shade and ornamental trees. Thousands and thousands of dollars are annually expended in ornamental planting, and whilst rare and costly exotics are gathered from all parts of the world, our own beautiful trees are neglected. The Tulip tree, or white wood, is one of the finest deciduous trees in the world, whether we consider its habit of growth, lofty and elegant, its foliage large, tropical-like, and glossy, or its flowers, as large and beautiful as the world-renowned tulip. People every day admire it, and enquire its name, when they see it growing luxuriantly in our grounds; but when when we tell them it is simply their native "white wood," they are surprized. Yet we can hardly persuade any one to plant it, just because it is a native of the woods.

What tree can be more beautiful than our chestnut, with its large, glossy foliage, and graceful cluster of flowers; or the elm, with its wide-spreading and gracefully-drooping branches; or the scarlet maple, with its bright and early blossoms, and silvery foliage; or the Amelanchier, (shad blow,) now lighting up the woods with its flowers of snowy whiteness; or the azaleas, (honeysuckle,) that will soon set the hills in a blaze of bloom. Then our noble oaks, hickory, walnuts, &c.,—why neglect such treasures, and seek for foreign species not half so grand or so beautiful? We would not discourage the introduction and planting of rare and fine exotics; they should be mixed with our native trees, to give the plantation an air of keeping and cultivation.

People who have not seen our native trees in open, airy situations, under good, careful culture, know nothing of their real beauties. An elm, or a tulip tree, crowded up in a thicket, with a tall, naked trunk, thirty or forty feet high, and a mere tuft of leaves on the summit, is a totally different object from the same tree standing on a lawn, with a finely developed form, and luxuriant foliage. Trees, like men, and more than men, show culture and care in their training. Now, we ask our young friends in the country, to take up this matter the present summer, and cultivate an acquaintance with the woodlands of their neighborhood. Some choice young specimens may be selected for removal, next autumn or spring, to the pleasure ground, or dooryard, or to the side of the highway, skirting the dwelling. Seeds may be collected as they ripen, and thus specimens may be reared that cannot be successfully transplanted from their native locale. Keep your eyes open as you pass around the fields and woods, as you would if you were "gunning," but with different feelings, and you will discover beauties that will surprise you and make you exclaim, "How strange we did not see these things before." It would give us great pleasure to hear from our friends in the west respecting their native trees.

HARDY TREES.

It is interesting to note the hardiness of various trees or shrubs not yet well known in the country. Though the past winter has not been a cold one in the northern states, yet the alteration of heat and cold have been so frequent as to affect many half hardy plants quite as much as a much lower state of atmosphere usually does.

Cryptomeria japonica and *Taxodium sempervirens*, two new evergreens which were expected to prove decided acquisitions to our pleasure ground, do not, we are sorry to find, after two years trial, prove to be really hardy. The young shoots of the latter have either been quite killed by the frost — even when the plants have been covered; while the former, though not absolutely killed, becomes so browned and enfeebled that it can never be looked upon as a hardy tree north of Philadelphia. In the climate of Baltimore and southward, we have no doubt that both these trees will prove quite hardy.

Pinus excelsa, abies Smithiana, Picea cephalonica, Thuya filiformis, prove perfectly hardy in all exposures. The Deodar cedar, we are glad to mention, is quite hardy, and flourishes admirably in this climate, and will soon be extensively planted as one of the most beautiful of evergreens. We have still some doubts about the hardiness of the *Araucaria* or Chili pine. It certainly stands the winter—but still it seems enfeebled by it. The tree seems to demand a soil composed of three-fourths *sand* as a necessity. In rich, damp, loamy soils it neither grows nor bears the winters—even about Philadelphia—while in a somewhat shaded position and in a very sandy soil, it thrives as far north as the Hudson Highlands. Whether it will take to our climate as it does to that of England — where it is certainly the most striking of all evergreen trees—remains yet to be proved.

One of the handsomest of all the new evergreens, is the Yew-like tree from Florida — *Torreya taxifolia.* Its rich, dark green foliage, its extremely elegant habit and rapid growth, recommend it particularly to amateurs. It has borne the past three winters about New York and in this neighborhood quite without protection.

Rhododendron catawbiense and its many beautiful varieties, sent out here from English nurseries, prove much better adapted to hardy culture than even the *R. maximum* of our native woods. They should find a place in every good garden — and should be planted in a deep shapy border composed of sand and leaf mould.

Wiegela rosea, Spirea prunifolia pleno, Buddlea, Lindleana and *Forsythia viridissima*—three of the finest new deciduous shrubs lately introduced, prove perfectly hardy in all situations. The evergreen *Euonymus* and its two varieties with gold and silver striped foliage, are quite hardy about New York, and seem particularly well suited for town gardens, where verdure in shrubs during winter is desirable.—*Horticulturist.*

The *Taxodium*, we may add, does not prove hardy with us. A plant that stood the winters of 1849 and 1850, died last winter. The *Cryptomeria* is much hardier. We have had three plants out two winters, very slightly protected, and they now look well. Many of the first plants sent out were cuttings. When we get good, healthy, stout seedlings, they will, we firmly believe, be perfectly hardy here.—Ed.

* * *

The Fruit Crop.—We have never had a more abundant promise, in Western New York, than at this moment, May 13th. In many parts of Ohio, and elsewhere in the west, late spring frosts have cut off everything.

A friend writes us from Boston, that the crop promises fair, but not large. The season there has been cold and backward, but less so than last season.

In the peach regions, New Jersey and Delaware, the crop will be much smaller than last year, but the quality better.

REPORT OF THE POMOLOGICAL CONGRESS.

We learn from the "Western Horticultural Review," that the proceedings of the Congress has been published, embodied with the annual report of the State Board of Agriculture, and consequently out of the reach of the greater number of those who take an interest in the subject. This was a poorly managed affair, and we would be glad to know from our friend Lewis F. Allen, Esq., of Buffalo, who was *mainly* instrumental in connecting the pomological meeting with the "Board," what he thinks of it now. In the first place, the connection destroyed the value of the meeting at the time; and next, it withheld the proceedings from the public for six months, and then sent them out embodied with State documents! We think that there will not be much difference of opinion, hereafter, as to the impropriety of pinning the pomological meeting to the skirts of agricultural, or any other societies or institutes, except those strictly horticultural. The only consolation we have, in regard to the proceedings, is that, save a few items already published, they are of very little importance.

We have received the following note from our friend Col. Hodge, since we wrote the above:

Friend Barry.—In the May number of the Farmer you inform a Horticultural friend, that the published proceedings of the late Pomological Congress, can probably be procured of the undersigned. And from very numerous inquiries, I infer that not a few of the 40,000 subscribers to the Farmer, are desirous, to procure a copy of these proceedings. Now, it would give me great pleasure to forward to any of our Horticultural friends a copy of this work — but I am unable to do so for the following reasons; I have no copies to spare; I have not even one for myself: I have never had the pleasure of seeing one. And although I have the bump of hope pretty prominently developed, yet the prospect of obtaining a copy grows less every day. I do not know who the publishers are; but would say to them, wherever they may be, that by forwarding me by express forty or fifty copies, I will honor their draft for the amount of their bill.

Query. — Which is the better way, for the Pomological Congress to publish its own proceedings and pay for the same, or leave this matter to be attended to by others? B. Hodge.—*Buffalo, N. Y.*, 1851.

* * *

Mulching.—We must again remind those who planted trees last spring, of the importance of this operation. It is now so much spoken of as to be pretty well understood — a covering of the ground about the base of a tree, to the depth of three or four inches, with litter or half-decayed manure, extending around as far as the points of the roots. All newly planted trees, shrubs, and plants, should be thus treated. It keeps the ground from drying up about the roots, and prevents the growth of weeds. And not newly planted trees alone, should be mulched, but bearing dwarf garden trees, gooseberries, strawberries, and all other plants whose roots are near the surface. For mulching strawberries, some clean material should be used, such as saw-dust, chaff, short hay, or straw, or something of that sort.

* * *

The Fruit Garden.—Our treatise on Fruit Trees is now published and may be had, we presume, at all the principal bookstores in the country. In the first edition, which was issued hastily during the busy season, a few errors appear; for instance, in the introduction, Kenrick is printed "Renwick." On page 52, pipe tile is said to cost "a shilling," instead of *a cent*, per foot. Pear No. 28 was intended to succeed No. 37. There are some other, less important, errors, all of which have been corrected in the second edition, just issued.

THE SEASON.

THE *eighth day of May* was really the first day of a spring warmth. Through all the month of April it continued cold and dry. On the night of the 10th, we had a soaking rain that went fairly to the roots of trees; and the day following, and to day, (the 12th,) have been as warm as mid-summer—the thermometer as high as 90°. This has brought out the leaves and blossoms with magical rapidity. Three days ago, only a few of the earlier currants, gooseberries, almonds, cherries, and plums were in blossom; to-day the gardens and orchards are white—everything, but apples, in full bloom, and promising a most abundant crop. We have not, in ten years, had a fairer promise. Of ornamental trees and shrubs in bloom, the principal articles are,

The *Pyrus Japonica*, scarlet and blush.

The *Mahonias*, beautiful evergreen shrubs, low and spreading, with great clusters of bright yellow flowers.

The *Amelanchier vulgaris*, covered with snowy-white blossoms.

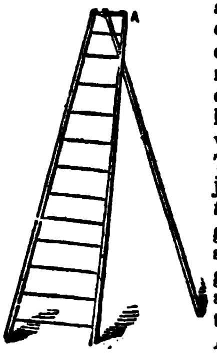
The Almonds, large and dwarf, double and single species and varieties, all very pretty.

Double flowering Peach, Cherry, and Sloe, and, in in a few days, we shall have the Thorns.

The flowering Currants are now in perfection. The *Gordoni*, crimson and yellow, and the new Double Crimson, (*Sarguinea flore pleon*,) are beautiful things—the latter, much finer than we anticipated. The clusters of flowers are three inches long, of a deep crimson, and each flower quite double.

LIGHT SELF-SUSTAINING FRUIT LADDERS.

For gardens where trees are low, and it is desirable to avoid bruising or breaking the branches, a "*self-sustaining*" ladder, of some sort, ought to be used. The annexed cut represents one which, if made of light material, can be conveniently carried in the hand. The steps should be wide enough to be stood upon. The single leg moves on a joint. A better way is to have *two* moveable legs, in order to give it increased strength and stability, and the weight is not greatly increased. Sometimes an upright piece is placed on the top to hold by, if necessary. Any ingenious person can make one of these, or something better, in an hour, and it will be found a great convenience; indeed it is indispensible where a few garden trees are to be managed, for the operations of pruning, fruit gathering, destruction of insects, &c., &c., require its frequent use.



JACQUES' NEW ENGLAND FRUIT TREES; A Practical Treatise on the Management of Fruit Trees. Adapted to New England. By GEORGE JACQUES, Worcester, Mass, 1849.

We are indebted to the author for a copy of this treatise, a neat, comprehensive, little volume in which we find the usual topics connected with fruit-tree culture, discussed in a manner that shows Mr. JACQUES to be a man of some experience. We have, for many years, heard his name connected with the nursery business, and the exhibition of fruits at the Worcester shows.

ANSWERS TO CORRESPONDENTS.

(MRS. JAS. H. WILSON, Whitesboro.) The insects you speak of as infesting your roses now, are aphides, and are easily destroyed with tobacco smoke, or by syringing them freely with a solution of tobacco juice and soap suds, or rain water.

(J. W. GRAY, Balls Pond, Ct.) The Northern Spy apple, with us, is this moment, middle of May, as *fresh* as it was in January last—decidedly the *best* long keeper we have. The tree is a rapid grower and good bearer, and the fruit, in addition to its excellence, is large and beautiful. We cannot, however, advise you to plant it extensively, because it may not succeed so well in your locality as it does here.

(J. R. MOSER, Flint Rock. N. C.) Shorten. but do not entirely remove the shoots from the stems of your trees. Those cut back within a foot or so of the base, should have all the branches shortened but the leader, unless you intend to train them in the form of a pyramid, in which case you leave the lower branches entire for they must be the longest. You will find instructions in detail on these and similar points in the "Fruit Garden." Your other requests have all been complied with.

CELERY FOR WINTER USE.—(D. B. W., Horse Heads.) The seeds, with you, ought to have been sown in the latter end of April, in a warm border of rich, light soil, and then transplanted when three or four inches high to strengthen and fit them for final planting out in the trenches. The trenches should be a foot deep, with at least three inches of well-rotted manure worked into the soil in the bottom before setting the plants. Hoe frequently and water freely in very dry weather. As soon as the autumn weather becomes cool, the earth may be gradually drawn in around to *blanch* it. In dry ground it may be preserved well in the trenches, all winter, by covering with leaves, or some other material that will so far exclude frost as to admit of some being taken out when wanted. Enough to last a month may be taken out at once and kept in earth in a cool cellar. It can also be preserved in pyramidal heaps out of doors, like potatoes, with earth mixed with them, and a thick covering to exclude frost.

(J. EDWARDS, Little Genesee, N. Y.) We are not certain that it is possible to restore apple trees in the condition which you describe—the heart wood decaying. They probably stand on wet ground. We find that in soils containing but a very small amount of stagnant moisture, apple trees soon become mossy in the bark, and the heart wood unsound. It might be that a good scraping and washing of the bark, and a moderate shortening and thinning of the branches, in connection with good culture around the roots, would restore them.

CULTURE OF THE ISABELLA AND CATAWBA GRAPES.—(ANNE C. MCCULLOUGH, Mt. Morris.) Very simple. They are propagated by cuttings of twelve or eighteen inches in length—two or three joints taken off in the fall or winter, and planted in the spring in good, deep, dry ground. The cuttings planted so that but one eye remains out of ground. In one or two years they are fit to be transplanted to the place where they are to bear. Before planting, a good, rich, deep border should be made. and a trellis, or poles, provided for them to be trained to. They require an annual pruning, that is, shortening the shoots of the previous season's growth to three or four buds. See our last volume, pages 69 and 70.

(DANIEL BIGELOW. Lakeville, N. Y.) Your apple, "Superior," resembles the Rambo in size, form, color, &c., but is less juicy and more compact, and, we should think, would keep much longer. It is a *good* apple, but not so good as the Northern Spy, and some other late keepers. We are obliged for your kindness in sending the specimens.

FOREIGN NAMES OF FRUITS AND FLOWERS.—Notwithstanding the outcry against the *un*-English names of fruits and flowers, our floral friends at Cincinnati have just named a beautiful new seedling Azalea, *Boule de Neige*, being pure white and of compact habit. They are not among the "reformers," else they would have called it, in plain English, "*Snow Ball.*"

Another, raised by S. S. JACKSON, Esq., is named *Warderia*, in compliment to Dr. WARDER, the editor of the "Review." This one is described as "white, with stripes and splashes of pale blush."

We see by the reports of the weekly exhibitions of the Cincinnati Horticultural Society, that their spring shows have been peculiarly rich.

Ladies' Department.

THE FLOWER GARDEN.

THROUGHOUT all the month of June, the decoration of beds and borders in the flower garden may be continued. We rarely plant our dahlias till the middle of the month. When planted earlier, they come into bloom in July, when the weather is so excessively warm and dry that they are scorched, the flowers do not open, and, on the whole, they do not give such satisfaction as when planted later, so as to come into bloom in the middle or latter part of August.

The Dahlia requires a good soil, moderately, but not too rich. When set in a bed of strong manure, the plants make a rank growth, but do not bloom so well, and the flowers are more apt to be coarse and ill-formed. A stake four or five feet in height should be set with each plant, to which it must be kept tied as it grows, being very easily broken by the wind. The Dahlia is really an autumn flower, and should not be expected to bloom, or forced into bloom, in midsummer.

For a few beds or masses on a lawn, or to fill up vacant borders, we would recommend,

1st, *A few Monthly Roses*, well selected as regards the color. They may be partly composed of Chinese, Bourbons, and Noisettes, as all these bloom incessantly, in a good rich soil. We may name, as first rate free growing, profuse blooming sorts,

BOURBONS—*Hermosa*, pale blush, very double and compact. *Souvenir de la Malmaison*, pale flesh color, very large and beautiful—indeed, one of the finest of ever-blooming roses, both in form, color, and luxuriance of growth and foliage. *Gloire des Rosamens*, a rapid, strong grower and fine bloomer, flowers not very double but large and of a most brilliant crimson. *Edward Defosse*, one of the finest new Bourbons, of a deep, rosy pink.

NOISETTES—*Ophire*, buff. *Chromatella*, or cloth of gold, deep yellow—very large and beautiful. *Fellenberg*, bright crimson. *Amie Vibert*, pure white.

BENGALS, or China Roses.—*Cels*, blush—a very free and fine bloomer. *Agrippina*, rich, velvety crimson. *Sanguinea*, blood red, with a stripe of white. *White Daily*, creamy white, and very sweet.

TEAS—*Lady Warrender*, pure white. *Luxembourg*, salmon buff. *Devoniensis*, straw color.

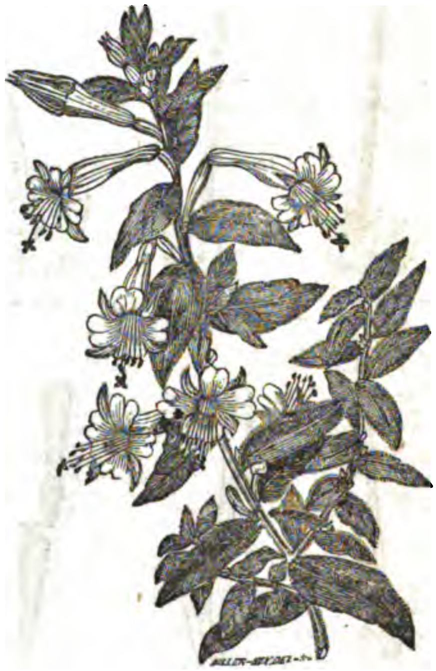
These are all good, and there are many others, perhaps, as good. A dozen plants, well assorted, will fill a good sized bed, and they will probably give more satisfaction than anything we could name.

Next to the roses, we would recommend a bed of Verbenas. No plant is better adapted to our dry, sunny climate, than this. A dozen plants, of as many different varieties, will make a beautiful display, from mid-summer until frost comes. The branches, as they grow, should be spread out and pegged down so as to cover the whole surface of the bed, making it a dense mass of flowers, relieved only by the mingling of the different colors. Then the

PETUNIAS.—These also are particularly well adapted to our climate, and cultivation has so improved their size, and varied their coloring, that they have become a most interesting class of plants. A single plant will cover, in a short time, three square feet of ground, and they bloom incessantly.

HELIOTROPES.—Too many of this cannot be planted, it is so sweet and so fine, either in masses, or mixed with other plants of more showy colors. The old sort is of a pale lilac, and the new one, *Voltarianum*, is a deep purple, rather bluish. These might be mixed, and some white flowering plant, such as *Double Feverfew*, set in the middle; or the deep blue *Plumbago larpentæ*, or the *Scarlet Salvia*, or even a fine *Fuchsia*, will make a good centre piece, both in growth and contrast of color. For single specimens on a lawn or border, the *Salvia Splendens Major* surpasses all other plants we know of. A small plant turned out in May or June, commences to bloom immediately, and it grows so rapidly, that, in the course of a month or six weeks, it will be three feet in height and as much in diameter, and will bear twenty or thirty long spikes of flowers of the most dazzling brilliancy. As we have said before, we know of no bedding plant, taken altogether, more desirable, and we recommend it among the smallest collections.

Cuphea platy centra, is another fine thing, either for planting singly or in masses, and it mingles well with Fuchsias, Heliotropes, &c. Its flowers are tube shaped, about an inch long, and the mouth is of an amaranth purple. Treated as a pot plant, in the house, this is an admirable thing. One of the best of recently introduced species in our green-houses now, small plants, are perfect masses of flowers. Its compactness of habit is a great recommendation.



CALIFORNIAN ZAUCHSNERIA.

The *Californian Zauchsneria* is one of Mr. HARTWEG's discoveries in California, an excellent and popular bedding plant, every way as easily propagated and managed as a verbena. The plant grows compactly, about two feet high, and blooms in the greatest profusion, even when quite young. The flowers are of an orange scarlet, in shape not unlike the trumpet honeysuckle. We think it may be preserved over winter, in the open ground, by laying a piece of turf over it in the beginning of winter; but it seeds well, and may thus be easily propagated like half-hardy annuals.

PHLOXES we have not mentioned, because they are now so generally cultivated as *hardy* border plants, that we do not deem it proper to class them with summer bedding plants. Still they are indispensable, and those who have not already supplied their gardens, may obtain plants in pots that will bloom the coming autumn.

SCARLET GERANIUMS.—We must not forget their large foliage and brilliant flowers, added to their free and constant blooming—qualities that make them desirable.

GARDEN IMPLEMENTS FOR LADIES.

PERHAPS we could not at a more appropriate season call attention to the nice collections of Garden Implements for Ladies, which are to be found at the Agricultural Implement Warehouses. Specimens shown us this spring, by J. RAPALJE & Co., of this city, are neater and better than any we have before seen.

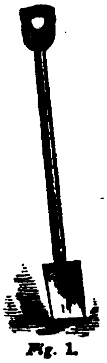


Fig. 1.

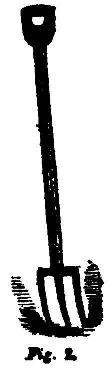


Fig. 2.

Fig. 3.

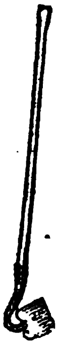


Fig. 4.

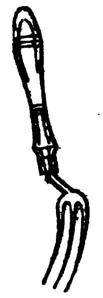


Fig. 5.

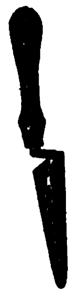


Fig. 6.

Fig. 1, is a small Spade, with a handle of the ordinary length, so that it can be used without stooping. Fig. 2, is a Garden Fork, for loosening the earth around flowers and plants. Fig. 3, Floral Rake. Fig. 4, Hoe. Fig. 5, Garden Fork, for loosening the earth around small plants and flowers. Fig. 6, Transplanting Trowell, invaluable for transplanting annuals from the seed bed to the place where they are intended to bloom, or for any other plant that it may be desirable to transplant

Editor's Table.

TO OUR READERS.—The present number completes the first half of the year. We have spared neither labor nor money to make the Genesee Farmer worthy of its extended circulation. We think we have the means of making our Journal still more interesting, during the remainder of the year, and we ask our readers, to make another effort to increase our circulation in their respective neighborhoods. We ask this particularly in places where few copies are now taken.—We can supply back numbers from January with *plate* of *Glass House*. With the July number we shall probably commence a series of letters from the World's Fair, illustrated with such engravings as may be necessary to a proper understanding of the subjects treated of. Before this number reaches most of our subscribers Mr. BARRY will have reached the shores of England, whither he has gone for the purpose of furnishing for our pages a full and correct account of what he may notice that will be interesting and profitable to the American Farmer. To those who read the Horticultural Department of this journal, we need not say that our report will be at least equal to any furnished for the American press. Mr. B.'s habit of close observation, practical common sense, and general information on all rural affairs, connected with excellent descriptive powers, warrant us in promising our friends a treat not to be excelled.

THE next STATE FAIR is to be held in this city, and being on the ground, we shall be enabled to add to the interest of our pages by a full report of what we may see and hear.

We have been often solicited to take subscriptions for a less term than a year, which for obvious reasons we have hitherto refused to do. At the request, however of many who for years have interested themselves in the success of the Genesee Farmer, and whose advice we always respect, we have determined to take subscribers commencing with the next number, which will be the first of the second half of the volume. The price will be one-half our usual charges for the volume, 25 cents for single subscribers, $1.00 for five, and $1.50 for eight copies. We are induced to make this offer, because our agents represent that many who have been deterred from subscribing on account of the high rates of postage, will gladly avail themselves of the reduction of postage by the new law, which takes effect on the 1st of July, to enroll themselves among our subscribers, and obtain a good agricultural paper at a price altogether trifling.

AGRICULTURAL IMPLEMENTS.—The improvement in agricultural implements certainly keeps pace with the improvement in agriculture. There never was before such a fine stock in Rochester, as at this time. We now have three well-filled establishments, Messrs. RAPALJE & Co., J. P. FOGG & BROTHER, and BRIGGS & BROTHER, and, from what we can learn, they are all doing a good business.

DAVID HALL, of Gaines, N. Y,, passed through this city a few days since with a fine lot of French sheep, of the Taintor importation, purchased of MERRIL BINGHAM, of Vermont. Mr. H. wishes the farmers in his neighborhood to call at his farm and examine them.

RATES OF POSTAGE ON THE FARMER established by *the new law*, which takes effect on the 1st of July.

50 miles,	5 cents a year.
300 "	10 " " "
1000 "	15 " " "
2000 "	20 " " "

The distance between 50 and 300 is reckoned as 300, and so between 300 and 1000, and the rest.

MR. BARRY'S "Fruit Garden" can be procured at our office, and as soon as the new Post Office law takes effect, we can send it by mail to any part of the country. Price $1,25.

Premiums.—We have been a little delicate about sending bound Books by mail, on account of the high rates of postage, and from the fact, too, that it was forbidden by the old law. The paper bound books, which it is lawful to forward, coming under the head of pamphlets, are not durable, and in no way suited to a farmer's library. By the good sense of our rulers, this evil is to be remedied on the 1st of July. We never could see why the Post Office Department should refuse to carry bound books, if fairly paid for the work.

Below we give the award of Prizes for subscribers obtained for the Farmer up to the 16th of April. In addition to the names here given, a large number of persons have procured very handsome lists—to whom we are greatly indebted—and in most cases have forwarded the books which we offered every agent who procured sixteen, or more, subscribers. We feel a great pleasure in being thus able to scatter useful books on agriculture, over the land. We have already sent nearly two thousand books, and have some more yet to forward to agents to make good our promise of premiums.

1st, *Ontario County, N. Y.*, *Fifty Dollars* in Agricultural Books, for the greatest number of copies of the Genesee Farmer taken in any county, being 765. This Library, according to the offer, is "to be kept as a County Agricultural Library, under the care of the Agricultural Society."

2d, *Calhoun County, Mich.*, *Fifty Dollars*, as above, for the greatest number of copies taken in any county out of the State of New York, (448.)

3d. To the Town sending the greatest number of subscribers, we offered a Library worth *Thirty Dollars*, which, we think, is taken by the Town of Marshall, Mich., in which 246 copies are taken, but from the difficulty we have found in ascertaining the towns in which the different post offices are situated, we cannot announce this as certain. If more copies than this are taken in any town, we hope some of our friends will inform us of the fact at once.

1st, **Jacob Frantz**, Paradise, Pa., for the greatest number of subscribers sent by one individual, (414) *Twenty Dollars* in Agricultural Books.

2d, To **Charles P. Dibble**, Marshall, Mich., *Fifteen Dollars*, for the next greatest number, (323.)

3d, **Wm. B. Stafford**, Waterville, Oneida Co., N. Y., *Ten Dollars*, for the third greatest number, (165.)

Selections of Books can be made by those entitled to them, or the choice left to us. Every agent can ascertain, by reference to the premium list in the January number, the amount to which he is entiled, and is requested to order, stating the mode of conveyance, &c.

* * *

Sales of Improved Stock.—L. G. Morris' *Great sale of Improved Domestic Animals* takes place on the 24th inst. For further information see his advertisement in this paper. Catalogues can be obtained at this office, or from Mr. Morris; if required to be sent by mail, the postage will be pre-paid.

Mr. George Vail's sale is on the 26th of June, at his farm, 2½ miles from Troy.

* * *

Advertisements, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to the farmers. We publish no other. Terms—$2,00 for every hundred words, each insertion, *paid in advance*.

* * *

Messrs. **Editors**:—Being a constant reader of the Genesee Farmer, and knowing that you take a great interest in promoting Agriculture in its various ways, and that you likewise have analyzed many soils and vegetables, I therefore take the liberty to ask you a question about the virtue of old Hops as a fertilizer of poor soils. There can any amount of two and three year old hops be bought at from one to two cents per pound. Would they, in your opinion, be worth that price for manure; and, if they would pay at that price, what would be the proper way to prepare them, and how should they be applied? My land is generally sandy, with a clay sub-soil. **Jacob Frantz.**—*Mount Hope, Pa., Oct., 1850.*

It will not pay to purchase hops at even "one cent a pound" for manure.

A New Work on Fruit.

CHARLES SCRIBNER (late Baker & Scribner) has just published

"THE FRUIT GARDEN,"

A Treatise intended to illustrate and explain the structure and character of the different parts of fruit trees—the theory and practice of the various operations connected with the propagation, transplanting, pruning and training of orchard and garden trees—the laying out and arrangment of various kinds of orchards and gardens, selection of varieties, treatment of diseases and insects, gathering and preserving fruits, &c., &c.—*illustrated with upwards of One Hundred and Fifty Figures.* By P. Barry, of the Mount Hope Nurseries, Rochester, N. Y. 1 vol. 12 mo.

SUMMARY OF CONTENTS.

Part I. Describes the different parts of Fruit Trees—Roots, Stems, Branches, Leaves, Blossoms and Fruit; explains their different Characters, Functions, and Practical Classifications. It treats, also, of Soils and Manures, of the best Modes of Propagation, and the General Principles and Practice of Pruning.

Part II. Treats of the Propagation and Management of Trees in the Nursery in detail, both Standards and Dwarfs, beginning with the Stocks and ending with taking up the Trees.

Part III. Treats of the Laying Out and Arrangements of different kinds of Orchards and Fruit Gardens, the selection of Trees and of varieties, Planting, Pruning, and Training of Standards, Dwarf, Pyramids, &c., &c.

Part IV. Contains Abridged Descriptions of all the best Fruits of well-established merit, with selections for various purposes and localities, and lists of new and promising varieties; also, a Chapter on Diseases and Insects; another on Gathering and Preserving Fruits, and one on the more important Implements used in Fruit Culture.

CHARLES SCRIBNER,
No. 36 Park Row, and 145 Nassau St., New York.

NOTICES OF THE PRESS.

"This admirably arranged volume possesses an almost incredible amount of condensed information, given, too, in so earnest and easy a manner, that, despite of the really heavy freight the mind is taking in on its way, the reader is carried on from chapter to chapter, like a smoothly running car, and we suspect few could put it by unfinished without regret, or renew its perusal without a pleasurable certainty of entertainment or profit; and we would especially call attention to the first chapter, for, remembering our own ignorance, and the no less bungling efforts of our neighbors and friends, in any operation of tree surgery, we feel how thankful we should have been if we could have availed ourselves of Mr. Barry's kindly offered solution of the many mysteries that puzzled us then."—*Home Journal.*

"A valuable, because simple and practical, work upon fruits and fruit trees in America. The book is illustrated with drawings well calculated to assist the fruit grower, and it should be in the hands of all who have a patch of land, or who love good fruits.—*North American Miscellany.*"

"A mass of useful information is here collected, which will give the work a value even to those who possess the best works on the cultivation of fruit yet published."—*New York Evening Post.*

"This is, in brief, the title of a neat volume of about 400 pages, prepared with evident care and ability by P. Barry, of the firm of Ellwanger & Barry, proprietors of the increasingly celebrated 'Mount Hope Nurseries.' The author is not only well read on the subject on which he treats, but in addition to his theoretical and scientific qualifications, he possesses a practical knowledge of the subject, in all its branches and bearings, that few writers have ever enjoyed.

'The work before us seems to be a thorough treatise upon the properties, modes of culture and most desirable qualities of fruits in general, with selections and descriptions of the most approved varieties for especial as well as general use. And the experience of the writer in the selection and rearing of the vast and superior varieties of fruit in Western New York—the great fruit garden of the country—as well as his familiarity with all the most approved varieties of eastern and foreign fruits, invest his book with a degree of authenticity and reliability well calculated to secure to it the utmost confidence.

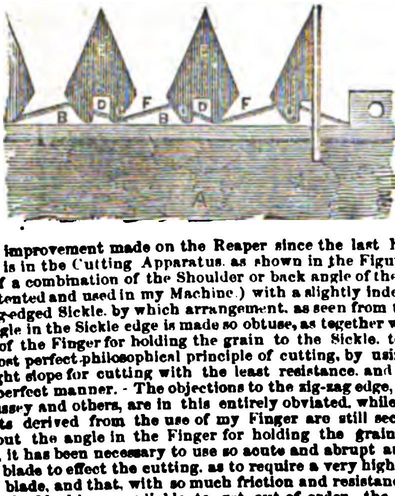
'Every fruit grower, whether large or small, should procure a copy of this excellent work."—*Rochester Daily Advertiser.*

"Our townsman, Mr. P. Barry, has done great service to the cause of fruit culture and ornamenting of court yards, in this new treatise of his. The work, as the title page explains, is designed to illustrate the physiology of fruit trees, and the theory and practice of all operations connected with the propagation, transplanting, pruning and training of orchard and garden trees. It also gives many and valuable ideas upon the laying out and arranging of orchards and gardens, and, in short, is a very encyclopedia of all information pertaining to fruit and fruit culture. It is from the pen of one in the highest degree competent for the task he has undertaken, and is illustrated by many plates and figures. It is a book that should, as it will, command a ready sale wherever its author is known, and among all who desire a first rate treatise upon the subject, from a practical hand. Mr. Barry wields his pen in a manner that does credit to him, and well illustrates the the possible union of cultivation of the soil and cultivation of the mind."—*Rochester Daily American.*

"It is, externally, a most pleasant appearing volume of nearly 400 pages, printed in elegant style. To all who take an amateur's delight in the cultivation of fruit trees and fruit bearing vines, the information embodied will be of great use."—*Rochester Daily*

McCORMICK'S PATENT VIRGINIA REAPER.

THE undersigned, in again offering his Reaper to the farmers of N. York, for the ensuing harvest, deems it unnecessary to say much in the way of advertisement, having provided for bringing the subject directly to the attention of those interested, by means of travelling and local agents, who are provided with hand-bills for distribution in the different wheat growing sections of the State, which furnish fuller accounts of the Reaper with the recent improvements made on it, than could be generally given through the newspapers of the country. It is deemed sufficient to say here that the undersigned has made ample arrangements for the supply of whatever demand shall be found in the State of New York, for his Improved Reaper, (having improved it more or less every successive year since its first introduction,) provided that application for the same shall be made in due time, and that Hon Thomas J. Paterson, of this city, will still act as his principal traveling agent and will appoint local agents in all the unoccupied districts and from time to time supply local agents for counties or small districts with hand-bills and all needful information in relation to the Reapers, which will be kept on deposite at Buffalo and Rochester, and it is also intended to have one at Brockport, at some suitable place where persons desirous of purchasing will do well to call and examine them. They are referred for them to Holt, Palmer & Co., of Buffalo. T. J. Paterson, Joseph Hall, and David R. Barton, Esqs., of Rochester—Mr. Hall well known throughout this State for the last 10 or 15 years as the most extensive and successful manufacturer of Thrashing Machines in this state; and Mr Barton, equally well known as the most extensive "Tool manufacturer" in the State, have, as will be seen from their advertisements, taken agencies for the sale of of the Reaper, the former in the counties of Monroe, Ontario and Wayne; and the latter in those of Livingston, Genesee and Wyoming. Mr. Hall will be supplied with patterns, and can furnish any parts of the Reaper that may be wanted, to purchasers, and Mr. Barton will be supplied with sickles for new and old machines.



The improvement made on the Reaper since the last harvest, which is in the Cutting Apparatus, as shown in the Figure, consists of a combination of the Shoulder or back angle of the Finger (as patented and used in my Machine.) with a slightly indented or zig-zag-edged Sickle, by which arrangement, as seen from the cut, the angle in the Sickle edge is made so obtuse, as together with the angle of the Finger for holding the grain to the Sickle, to effect the most perfect philosophical principle of cutting, by using just the right slope for cutting with the least resistance, and in the most perfect manner. - The objections to the zig-zag edge, as used by Hussey and others, are in this entirely obviated, while all the benefits derived from the use of my Finger are still secured — Without the angle in the Finger for holding the grain to the sickle, it has been necessary to use so acute and abrupt an angle in the blade to effect the cutting, as to require a very high motion to the blade, and that, with so much friction and resistance as to make the Machine very liable to get out of order—the cutting being done more by means of the abrupt stroke against the grain than by the edge of the instrument. This is understood by every boy who knows how to draw a knife in cutting a stick, and needs only to be stated to be understood by all.

The price of the Reaper will be the same as heretofore, deliverable at Rochester or Buffalo, subject to storage—$30 payable on delivery, and $80 on the first of December thereafter, with interest from the first of July, or $105 cash, and warranted to cut one and a half acres of wheat or other small grain per hour, and that the raking can be well done by a man riding upon it—that it is well made and durable with proper care. One of them cut at a late harvest 300 acres without a shilling's repair, or without changing or sharpening the sickle. Further comment is unnecessary—the undersigned being still determined (as heretofore) to introduce the Reaper upon its merits and to the satisfaction of the favoring community, who should look well to the form of the guarantee offered by others.

The undersigned will be excused for taking only a passing notice of two or three other Reapers he finds advertised in the papers before him. And first as to Seymour & Morgan's New York Reaper, it would seem almost like being cruel to say much now, after the tame and subdued account given by them in the April number of the "Genesee Farmer," compared with the insolent as well as false account published by them in the Democrat of December last, which was replied to by the undersigned shortly thereafter, (and which may be seen by reference to the Democrat or to any of the agents.) and to which they have not ventured an attempt at a reply. It may be remarked here, that the certifi[illegible]s they have published, are of the operations of the Reaper of [illegible]ear, which they have been enjoined from building or selling; that those certificates are few and far between—there being but one from this State, and that a very weak affair; that all of the thousand and one reapers offered to the public, have been accompanied with a flourish of certificates quite equal, if not superior or recommend it to the public favor; provided, too, that they had to theirs—some such being in all such cases, attainable at a cheap rate, and that this new born experiment of theirs, to which they have felt themselves driven as a last resort, has nothing but their opinion, in their straightened situation, to support the right to make and sell it, which, also, remains to be tested — From trials made in the west of placing the raker on the "back side" of the platform, and which were well known to Seymour & Morgan before they, from their supposed necessity of the case, adopted it, the undersigned is sure it will result in a failure, and has been informed that they have provided what may be used as a seat at the side of the machine also, in direct and absolute defiance of the injunction, to be resorted to if the other should fail. The effect of the weight of the man on the left and back sides of the platform will be at once perceived by all who know any thing about the machines,—and which creates the indispensible necessity for the "large wheel" on that side, of which they speak, in addition to the fact that it is impossible for the man from behind to discharge the grain from the machine in good order for binding, which can only be done at all by a fork, at arm's length, instead of the grain being turned around neatly, as it can only be done by the natural sweep of the rake around the body of the man, (at the side,) as the centre of the circle described, and his weight balances so much on the other side of the machine, instead of adding to it. Under these circumstances, how far the public can again be induced to lean upon the broken reed of "Seymour & Morgan" remains to be seen. Their repeated cry of "wolf," in the former case, will at least not be likely to be headed in the latter. And the public are really too well advised of the fact that the Virginia Reaper has been "thoroughly tested" and they might have added, by thousands, to be influenced in the smallest degree by the ridiculous, as well as false statement of S. M., that a "large number of Virginia Reapers are now scattered throughout the country, condemned and unsold." This is another base and unmitigated falsehood of their own making, there being only thirteen of the (Chicago) Reapers sold in the State of New York, now unsettled for, most of which, if not all, it is believed will be, after a trial in the next harvest, and which was mainly owing to a want of due attention in putting them in operation properly, and believed to be a larger number than all other contested cases put together, of the 1400 Reapers sold at Chicago for the last harvest. These worthies well knew that, considering the amount of business done in the manufacture and sale of the Virginia Reapers, no parallel to its success can be furnished in this country in the manufacture of agricultural implements; and yet they would resort to such unmanly and contemptible means to undermine the character of a Reaper which they have been unable to overthrow by all these piratical efforts, which are likely soon to be punished as they justly deserve.

In relation to Hussey's machine, the undersigned will only reproduce the following notice of the inventor, in the last number of the Albany Cultivator, which repudiates his own machines as heretofore manufactured at Auburn for years by his brother, and which is the only one that has been offered to the farmers of New York, and refer to the communication of Joseph Hall, Esq., which follows it.

"Editor Cultivator—As the inventor of what is known as Hussey's Mowing and Reaping Machine, I am not willing to be held responsible for the operation of such machines as are not built by myself, at my manufactory in Baltimare; if those persons in other parts of the country, who are building by permission, and those who are infringing on my rights, do not keep up with my improvements, it is unjust that these machines should be allowed to give a character to my own. OBED HUSSEY."

C. H. McCormick, Esq :—I have been induced to take an agency for the sale of the Virginia Reaper, believing it to be *the best machine* for cutting wheat in use, and have determined to place one upon my own farm, after having purchased and used one of Hussey's Machines, and thrown it aside upon finding there was no economy in using it; it being necessary that the grain should be bound as fast as cut, requiring more help at one time than at others, to keep up with it, occasioning the stoppage of the machine at times, while at other times the men were not fully employed. Then again, the difficulty of cutting thin wheat, or cutting at all upon hill sides, the speed with which you have to drive, the power required to cut stout wheat, the wear upon horse flesh, and the impossibility of cutting at all (as it has no reel) when the wind is blowing with you, destroys, in my judgment, the utility of the machine. JOSEPH HALL.

Rochester, May 13, 1851.

Local Agents are requested to keep up a regular Correspondence with the undersigned, at Chicago, Ill., who will at all times be pleased to be enquired of through the mail, by any one, in relation to the Reaper, or so directly to receive orders for the same.

Mr. Paterson may, and should also be written to, but he will necessarily be much from home, and all delay should be avoided that can be. C. H. McCORMICK.

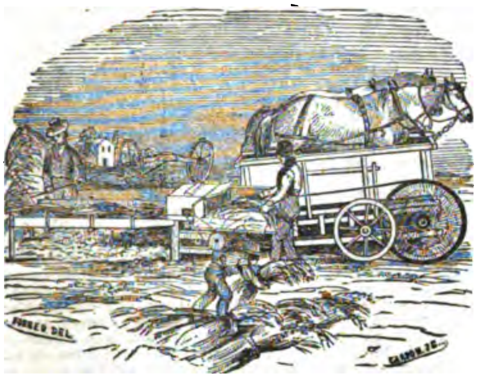
N. B.—Reapers will be forwarded to any part of this State, or to Canada; where there are no local agents to attend to the delivery and in starting them, without warantee, at five dollars deduction from the prices named, if ordered in season of THOMAS J. PATERSON, Rochester, N. Y., Office No. 6 Burn's Buildings, accompanied by a satisfactory reference.

Rochester, June, 1851.

New York State Agricultural Works.

AGRICULTURAL MACHINES AND IMPLEMENTS.

WHEELER, MELICK, & CO. continue their Manufactory at the corner of Liberty and Hamilton Sts., Albany, where they are prepared to fill all Orders with despatch.



Orders for WHEELER'S PATENT RAILWAY, CHAIN HORSE POWERS, and OVERSHOT THRESHERS & SEPARATORS, will receive their prompt attention. The large and increasing demand for these Machines, has induced the proprietors to erect a new and spacious Manufactory, and otherwise extend their means of promptly filling orders. Their Powers and Threshers have been sold in nearly every State in the Union, during the past year, and their superiority has been acknowledged by numerous testimonials, not only from Agricultural Societies but from persons who have used them. They have been awarded the first premiums at all the principal Fairs where they have been exhibited in operation, including the Pennsylvania State Fair, the Provincial Fair of Upper Canada, and the Michigan and Ohio State Fairs, together with numerous County Exhibitions in the different States.

The Two Horse Machine with from three to five hands, will thresh from 125 to 200 bushels of Wheat per day, or twice that quantity of Oats.

The One Horse Machine will thresh rather more than half that quantity.

PRICE AT ALBANY.

For Two Horse Machines,	$145.00
For One Horse Machine,	120,00

Machines will be shipped to order to any part of the United States or the Canadas.

The subscribers are now shipping Powers and Threshers to their agents on the Mississippi and Ohio rivers, and in the interior of the States bordering on those rivers, and to all the principal ports on the Lakes, as well as to their numerous agents in the interior of the Lake States. They will be delivered at all our agencies with only the cost of transportation added to our home prices. Persons wanting to purchase, may, by writing to us, learn where they can obtain our machines most conveniently.

N. B.—Our Machines *are warranted*, as heretofore, *to work to the satisfaction of the purchaser*, or they may be returned within sixty days after they are received, and the purchase money, if paid, will be refunded.

We want a few more agents in most of the States. To competent men, who can give satisfactory references, liberal commission will be allowed.

WHEELER, MELICK & CO.,
Corner of Hamilton and Liberty Sts., Albany, N. Y.
(Near the Steamboat Landing.)

For sale, at Albany prices, by RAPALJE & CO., General agents for Western New York, at the Genesee Seed Store and Agricultural Warehouse, 65 Buffalo St., Rochester, N. Y.

CAUTION.

The subscribers, Patentees of *Wheelers Patent Horse Powers*, having noticed that an Agricultural Firm is advertising that Wheeler's Patent Horse Powers and Overshot Threshers are manufactured and sold by them, when in fact they have not obtained from us any liberty to use our Patent, we hereby caution all persons that said firm has no right to use our Patent, or to manufacture or sell said Horse Powers, and that a sale by them will confer no right upon the Purchaser to use such Power.

Messrs. WHEELER, MELICK & CO., of Albany, and their Agents, are the only persons authorized to make or sell *Wheeler's Patent Horse Powers*; and every such Power made or sold by them, or by any person having a License to do so, has upon one of the Cast Iron Semi-Circles at each end of the Power, the words "WHEELER'S PATENT—WHEELER, MELICK & CO., MAKERS, ALBANY, N. Y."

A due attention to this fact will enable purchasers to avoid imposition and fraud.

No person or firm in Albany, except Wheeler, Melick & Co., is authorized to make or sell said Horse Powers.

Albany, April, 1851. A. & W. C. WHEELER, Patentees.

IMPORTANT TO MILLERS.

The American Miller and Mill-Wright's Assistant.

THIS is the most valuable book for practical Millers and Millwrights, extant. It is a new work recently published by Wm. C. Hughes, who is himself a practical Miller, and has spent the best portion of his life in the business of constructing, planning, and managing of Flouring Mills and the manufacture of flour. In preparing this work for the Milling public his object has been to establish a correct guide to the business, instead of speculative theories. Special regard has been paid to most of the essential improvements which have of late been introduced for the benefit of the Miller.

A few of the important subjects treated of and here given, taken from the contents of the work, are

Water power calculated for all heads; The size of the wheels for all heads, with the amount of water necessary to use on the same; The entire science of dressing the Mill Stone, with a practical treatise on Grinding; Remarks on the Culture of Grain; &c.; Table of Grain grown in the United States; Explanation of Technical terms used in Milling; The Quality of French Burr, as best adapted for grinding Wheat and Corn; The proper size of Mill Picks for dressing Stones; Composition for Tempering Cast-steel Mill Picks; The amount of Help necessary to be employed in a Mill of four run of Stones, with their dutie respectively; Remarks on Packing Flour; Table for Packing Flour; &c., &c.

No Miller or Mill-wright should be without the Book, as the price is nothing in comparison to the value of the information it contains. The following Millers in Michigan, having examined the work fully approve of and recomend it to public notice;

Mathews & Beach, Pontiac;
R W Lawson, Mt. Vernon Mills, "
E R Brookfield, Volant "
J W Fenner, Mt. Pleasant "
W W Eddy, Sturger's Prairie "
L Dow Crippen, Cold Water "

D P Bonnell, Tecumseth Mills;
Charles W Chapel, Utica "
E Brakham, Rochester City "
E Carpenter, Pontiac
J W Hughtlin, Charleston "
J Cupit, Stony Creek "

A long list of others might be given, but it is thought unnecessary.

Mr. Hughes has recently been appointed Flour Inspector at Buffalo, a very important post, showing the confidence the Millers and Shippers have of his ability.

The book is 12mo. size, and done up in good strong binding. Price, $1.50, at retail. ☞ Any person sending me *three dollars* by mail, and paying postage, shall have two copies sent him, done up in paper binding, (the only mailable way,) free of charge, or four copies for $5.

Books sold to pedlars and agents at reduced prices.

GEO. W. FISHER, Bookseller and Publisher,
Rochester, June, 1851. No. 6 Exchange st.

NEW YORK WIRE RAILING WORKS.

WIRE RAILING.

[SECURED BY LETTERS PATENT.]

ENCLOSURES FOR PUBLIC GROUNDS AND CEMETERIES; Fences for Cottages, Gardens, Farms, &c.

Window Guards and Gratings, for Stores, Dwellings, Lunatic Asylums, Prisons, &c.

Columns and Cornice Work for Cottages and Verandahs.

The above are made entirely of Wrought Iron and Wire, at one half the cost of Cast Iron, being extensively used in the city of New York, &c.—Superceding all other kinds of work for the same purpose.

RAILROAD AND FARM FENCE,

Made with Wrought Iron or Wooden Posts, being so constructed as to be used for moveable or permanent fence, at 80c. to $8 per rod.

Wire for Fences always on hand.

Portable Iron Bedsteads, Iron Statuary, Greyhounds, Dogs, Lions, &c.

Wrought and Cast Iron Railings made to order.

By addressing the Manufacturer and Proprietor, Circulars and drawings of the above will be forwarded.

JOHN B. WICKERSHAM.
Works, 59 and 61 Lewis Street. 240 Broadway.
AGENTS—C. B. Conant & Co., 215 Pearl street, New York.
New York, June, 1851.

Removal.

A. R. PRITCHARD'S Trunk Depot has been removed from 19 to 78 State street, recently occupied by Stoddard, Freeman, & Co., where can be found the largest assortment of *Trunks, Valises, Carpet Bags, &c.*, west of New York, and at the cheapest rates, wholesale and retail.

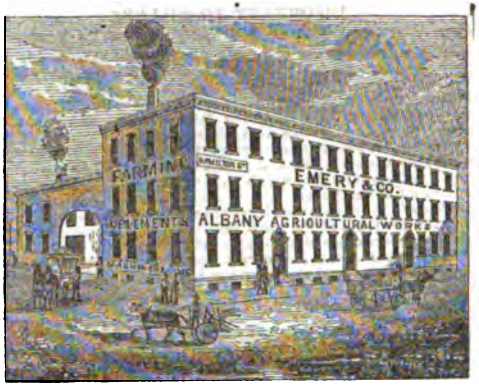
Rochester, June, 1851.

Improved English Seed Drill.

THIS is the best Drill out for sowing onions, carrots, beets, turnips, &c., &c., and should be in possession of every farmer and gardener. A full assortment constantly on hand and coming, and for sale at manufacturers prices, at the Agricultural Head Quarters, No. 65 Buffalo st., opposite the Eagle Hotel

June 1851. J. RAPALJE & CO.

SEED DRILLS.—Emery's Improved Seed Drills, the best in use, for sale by J. P. FOGG & BROTHER,



EMERY & CO.'S

NEW YORK STATE AGRICULTURAL SOCIETY'S

FIRST PREMIUM

RAILROAD HORSE POWER,

AND

OVERSHOT THRESHER AND SEPARATOR.

THE attention of the farming public is solicited to the newly improved Railroad Horse Power, as now made by the subscribers. Also to their Overshot Spike Cylinder Threshers, with Vibrating and Revolving Separators.

Having had much experience in the sale and manufacture of Horse Powers and other Agricultural Implements, and being acquainted very extensively with the wants of the farmers of this country, as well as the character of most of the implements and machines now in use, we think we hazard nothing in pronouncing our latest improved Horse Power far superior to any before made or sold by us, or with which we are acquainted

At the late Fair of the New York State Agricultural Society, held at Albany, their committee on Horse Powers unanimously awarded us the highest premium for the best Railroad Horse Power, among the large number of the most popular and approved kinds of the day, which were on exhibition and in competition,—it being considered the most efficient and durable on the ground.

As the principal mechanical parts of its construction differ so materially from those mostly sold by us, previously to the past season, as well as from all others now in use, we have thought it an object to the farmers, as well as for our own interest, to illustrate them by cuts and descriptions, as shown in the Farmer for March. The advantages of the recently adopted improvement are numerous and plainly seen, one of which is removing all the gearing and wearing parts to the outside of the Power, where it is free from dust and dirt, &c., and where it may be boxed up, requiring little time or oil to keep them in the best possible running order.

The liability of breakage and wear, and slipping of links and pinions, as in the rack and pinion powers, and most others, is wholly removed. In shipping them, the gears are taken off and packed in a box with other things.

Having sold a large number of the IMPROVED Machines the past harvest, all of which having given entire satisfaction, and when used side by side with the most approved of other kinds, having been preferred, we do not hesitate to recommend and warrant them equal, if not superior, to any before made or sold by us, or of which we have any knowledge.

Our Thresher consists of a small spiked cylinder, about fifteen inches in diameter, and twenty-six inches long, with a substantial spiked concave above this cylinder, which is adjustable to the work to the work to be done. The feeding table being level, allows the feeder to stand erect, and is little annoyed with dust and dirt—and no possibility of hard substances getting into the Thresher to its injury.

We attach a vibrating or revolving separator to them, which serves to separate all the grain from the straw, and leave it with the fine chaff for fanning mills, while the straw is carried off for stacking.

Having heretofore been obliged to have a large portion of some parts of our work done by contract, we have felt the inconvenience and want of dependendence to be placed upon the quality of materials and workmanship; we have now so extended our facilities as to enable us to make all parts of all our own machines, and can now assure the public that none but the best work and stock will be offered by us.

The Two Horse Power Thresher and Separator is capable, with three or four men, of threshing from 150 to 200 bushels of wheat or rye, and the single one from 60 to 100 bush., or double that quantity of oats per day.

The price for Emery & Co.'s one Horse Power,...	$85 00	
do do Thresher and Separator,.	35 00	
do Bands, wrench, oiler and extra pieces,.	5 00	—$125 00
do Two Horse Power,........................	110 00	
do do Thresher and Separator,.	35 00	
do Bands, oiler, wrench, &c.,............	5 00	—$150 00

Price of Emery's Thresher and Cleaner, with bands wrenches, &c.,..............	$75 00
do Saw Mill, complete for use,..............	35 00
Price of Grant's Fan Mills, adapted for hand or power from..............	$22 00 to 28 00

Also Wheeler's Rack and Pinion Power, manufactured by ourselves, and warranted equal to any of the kind in use, [or made and sold by any other manufacturer,] which we sell with a full guarantee of the right of using the same in any territory of the United States, for the following prices:

One Horse Power,..................	$75 00
Two Horse Power..................	100 00

The Threshers not being patented are the same as above quoted.

All the above are subject to the warranty of three months use and trial, and if not satisfactory may be returned and full purchase money refunded.

For further particulars see Illustrated Catalogue, furnished gratis on application to EMERY & CO.

Original and sole Proprietors of the Albany Agricultural Works, Warehouse and Seed Store, Nos. 369 and 371, Broadway, Albany, N. Y.

June 1851.

DOMESTIC ANIMALS AT AUCTION.

THE postponed yearly sale of Full Bred Short Horns and Improved Dairy Stock, consisting of about fifty head, will come off at my farm on Tuesday, June 24th, 1851, at 12 o'clock, M. I shall dispose of all the improved Dairy Stock, which is composed of the finest Short Horn, with a slight cross of Amsterdam Dutch, which some writers say was part of the original ingredient which composed the improved Short Horns.

I am now breeding Short Horns, Devons and Ayrshires, each separately and pure, which, owing to the limits of my farm, make it necessary to confine myself to those three breeds. By the awards of the State Agricultural Society, the American Institute, and my own County Society, (with the exception of last year, when I was not a competitor at either,) it will fully appear that I have been a very successful exhibitor. The Cow which won the First Prize as a milker, at the American Institute last year, was bred by me, and composed of the above alluded to Dairy Stock. Several of the Bulls got by Lamartine will be of the most appropriate age for efficient service the coming season. All Cows and Heifers old enough, will be warranted in calf at the day of sale, by my imported Bull, Lord Eryholme, or my celebrated Bull, Lamartine.

I own two thorough bred Devon Bulls; one the celebrated old Major, the other, one and a half years old, imported by me from Devonshire. One of the above animals will be sold—which, I have not yet determined.

A full Catalogue, with the pedigree of each animal, will be published in due time, with minute description of sale, &c.

I also have a number of Suffolk Sows, in pig to my imported Boar, most of the progeny of which will be old enough to dispose of on that day.

I also have about 20 South Down Ewes, most of which I imported from the flock of Jonas Webb, and now in lamb to my imported Buck, Babraham. Some of the Buck Lambs will be offered at auction on that day.

This sale will not only offer an opportunity to obtain Stock from my previous herd, but will also enable persons to procure calves from my imported Bull, lambs from my imported Ram, and pigs from my imported Boar—all of which animals were recently selected by me in person, when in England.

The mode of warranting the Cows and Heifers in calf, is this: in case they prove not to be so, it shall be optional with the purchaser, on his *certificate of that fact*, either to receive from me $25 (say twenty-five dollars) or to send the cow to my farm, and I will keep her the proper time (free of expense) to have her got in calf to either one of my Bulls, which he shall choose. I will give $25 for any Heifer calf from either of the Cows or Heifers sold at the sale, delivered on my farm, at two weeks old.

Stock purchased to be sent at a distance, will be delivered on ship-board or railroad in the city of New York, free of risk or expense to the purchaser.

Persons living at the South, in a climate to which it would not be well that stock should be transported at that hot season of the year, may let such animals as they may purchase, remain with me until the proper season, and I will have them well taken care of, and charge only a reasonable price for their keep. One of my objects in breeding improved domestic animals, is to assist in distributing them throughout the Union, deeming it one, if not the most important feature to promote profit to the cultivator of the soil, and to benefit the consuming country at large.

All communications through the Post please pre-pay, and I will pre-pay their answers, and also a Catalogue if required. Catalogues will be to be had at all the principal Agricultural Warehouses and offices of the principal Agricultural Journals, on and after the 1st day of June next. Persons wishing to view the stock at any time, will find my superintendent, Mr. Wilkinson, to give them the desired information when I am at not at home.

Dated, this 4th day of March, 1851, at Mount Fordham, Westchester County, eight miles from the City of New York, by the Harlem Railroad. [4-3t] L. G. MORRIS.

Emery & Co.'s Horse Powers and Threshers.

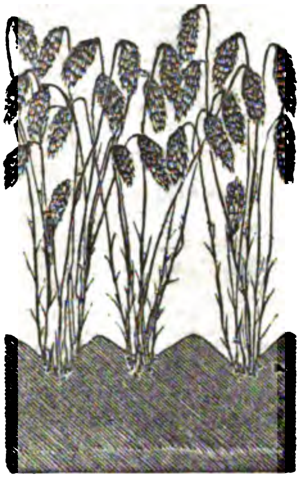
EMERY & CO.'S Premium Railway Horse Powers and Threshers, which were awarded the first premium at the last State Fair, in competition with many others, for sale at the State Agricultural Warehouse No. 25 Cliff street, New York.

[6-4t] G. H BARR.

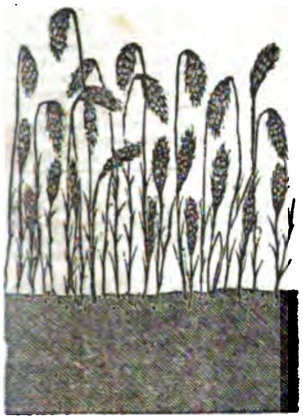
SEYMOUR'S GRAIN DRILL.

THIS Machine is established upon the principle of Seymour's Broadcast Sowing Machine, and proves to be better adapted to the purposes for which a Grain Drill is wanted than any other which has been tested in our country, being not only capable of sowing Wheat, but all Grain and Seed, from Peas, Corn and Cotton to Grass Seed, either BROADCAST OR IN DRILLS, and fine fertilizers, such as Lime Plaster, Guano, Bone Dust, &c. may be mixed with the grain if desired, or sown by itself broadcast.

When drilling with this Machine, the grain falls from the grain box to the tubes (a space of six inches) in full view of the person attending it, so that in passing over the field he may be constantly assured that the seed is deposited as he designs. The teeth are all raised from the ground at once, with one lever, and the seed all stopped at once; or any one may be raised at a time. The convenience and simplicity with which this machine is managed is unparalleled. No necessary expense or pains have been spared in making it as desirable, in all respects, as possible; and after many and the most satisfactory experiments,—not in the winter on the floor of the machine shop merely, but in seeding time, with the farmer, under various circumstances, on rough and smooth, hilly and level, stony and clear land,—the inventor (who was bred a practical farmer, and ought to know something of the farmer's wants) feels assured that the Machine is not only established on correct principles, but is got up in that simple and permanent style and good taste which cannot fail to suit all. Teeth 8 inches apart or as ordered.



WHEAT SOWN WITH A DRILL.



WHEAT SOWN BROADCAST.

The first premium for a Grain Drill, capable of depositing fine manures with the grain, was awarded to this Machine at the Fair of the New York State Agricultural Society, held at Syracuse in September, 1849—and again by the same Society at the Fair in Albany, in 1850. It also received the first premium at the Michigan State Fair, in 1849, and the first premium of the Ontario County Society. It has been much improved within the last fifteen months.

The difference at harvest, between the appearance of wheat sown with a good drill, and that sown broadcast, is fairly represented by the cuts; they show that sown with the Drill to be more uniform in its growth and maturity, and a heavier crop. Drill with 7 teeth, $70; 9 teeth, $80; 10 teeth, $90.

SEYMOUR'S GARDEN DRILL

Is a small machine, of suitable size to be drawn by a man. It is got up on the principle of the Grain Drill, and will plant peas, beans, beets, and even carrots, or any kind of garden seeds, mixed with plaster, &c. It is very convenient for large gardeners. It will sow 7 rows 5 inches apart, 4 rows 10 inches apart, 3 rows 15 inches apart, 2 rows 20, 25 or 30 inches apart, as readily as any other Garden Drill in common use will sow one, and is much less liable to clog. It is the Grain Drill reduced in size.

Price of Garden Drills, $60.00.

REFERENCES.

Harlow Munson,
Hiram Steele,
E. F. Wilson,
Enos Boughton,
D. W. Marts,
Fred. Buel,
Peter Barnard,
Philip Reed,
Marcus Norton,
Sam'l Westfall,
Sylvenus Emmons,
Isaac Moore.

SEYMOUR'S BROADCAST SOWING MACHINE.

This Machine is well known in Western New York, and is universally acknowledged to be the best implement in our country, for the purposes for which it is intended. It sows correctly all kinds of Grain (and any desired quantity per acre) from peas to grass seed—including wheat, rye, oats, barley, buckwheat, rice, hemp, flax, clover and timothy seed. Also, plaster, lime, salt, ashes, bone dust, &c., &c. It is capable of dusting every inch of ground on an acre of land with less than half a bushel of plaster, and thirty or forty bushels of lime may be thus evenly applied to the same amount of land, if desired. IT SOWS TEN FEET WIDE, *or may be made narrower to order*. This Machine has been much improved by substituting iron in several important parts in the place of wood, making it a very durable article. It has received the highest recommendations from hundreds of the best farmers in our country, among whom are Myron Adams, W. W. Gorham, D. C. Bates, Dea. S. H. Andrews, Rufus Humphrey, Jared H. Boughton, Levi Boughton, Hon. Robert L. Rose, Guy Collins, of Ontario County, and others (too numerous even to mention their names) in many parts of the United States.

☞ It has taken the FIRST PREMIUM at five County and three State Agricultural Fairs. All Orders promptly attended to.

PRICE—Fifty Dollars. PIERPONT SEYMOUR.

East Bloomfield, Ontario Co., N. Y., June, 1851.

Great Sale of Superior Thorough-Bred Short Horn Cattle.

THE subscriber having more Stock than he can well sustain on his farm, will offer at Public Auction about THIRTY head of his Improved Short Horn Cattle, consisting of Bulls, Cows, Heifers and Bull Calves, on the 26th day of June next, at his farm 2½ miles from this city.

It is known to breeders of improved stock, in this country, and in Canada, that the proprietor of this herd during the past 12 years, has through the medium of importations from England, and selections from the best herds in this country, spared no expense to rear a herd of cattle from which superior animals could be safely drawn for improvement and crosses upon other breeds. His importations have been derived from that eminent breeder, the late Thomas Bates, Esq., of Kirklevington, Yorkshire, England, which herd it is well known has recently been disposed of at public sale by his adminstrators, and dispersed into many hands, and can no longer be resorted to as a whole, for improvement. The announcement of that sale created great interest, and all Short Horn breeders in England seemed emulous to secure one or more of these animals to mingle with the blood of their own herds, and at the day of sale, there was found assembled the largest audience ever before witnessed upon a similar occasion, numbering, as was said, from 4 to 5,000 persons, and among them the best breeders in England, and several from other countries. Some of the animals bro't prices which seemed incredible to many.

In the herd now offered for sale, will be included the Imported Bull, Duke of Wellington, and the premium Bull, Meteor. These are Bates' Bulls, and their reputation as stock-getters are too well known to need any comment. I am authorised to say by Lewis F. Allen, Esq., of Black Rock, one of the most prominent breeders in this country, and who has had ample means of forming a judgment, "That in no instance, to his knowledge, had these two Bulls been bred to Short Horn Cows of other herds, previously imported into the United States, but that their produce were superior in general qualities to such herds."

The most of the Stock which is now offered for sale, have been bred from these two Bulls; and the proprietor, having a young bull more remotely connected with that portion of the herd he retains, (being about 14 in number,) can spare these two valuable Bulls. There will be in the Stock offered for sale, 6 young Bulls, from 8 months old to 2 years, in addition to the two named above; and the remainder of the Stock will be composed of Cows, (most of them possessed of extraordinary milking qualities,) Heifers and Heifer Calves. It is believed that no herd of Short Horns has ever been offered for sale in this country, exhibiting more of the valuable combinations of qualities which contribute to make up perfect animals.

A Catalogue containing the pedigrees of these animals will be ready for delivery at an early period, in which the Terms of the Sale will be particularly stated. A Credit will be given from Six to Eighteen months. Gentlemen are invited to examine the herd at their convenience. GEO. VAIL.

Troy, N. Y., March, 1851. [4-3t]

Important to Wool Growers.

I PROPOSE to sell twenty-five pure Pauler Merino Ewes with lamb by a French Merino Buck, purchased of A. L. Bingham, of Vermont. Also, twenty-five yearlings from my Pauler Ewes and French Buck. Also, a few choice Bucks. My flock originated from R. V. R. Horton's flock, of Rutland Co., Vt., a description of which can be found in Vols. 2 and 3 of the Cultivator. I purchased, of Mr. H., eleven Ewes and one Buck in the winter of '45. I have also had Bucks from Avery, of Saratoga, at different times, which I will sell at prices within the reach of common farmers.

N. B.—Any one wishing to purchase some good Sheep, could satisfy themselves by calling at Shearing time. For information address N. H. NOYES,

[6-1t] Otisco, Onondaga Co., N. Y.

Tile Machine.

AN elegant and finished article, an improvement on Whartenby's imported Tile Machine, may be had, made to order, at Purdie's Foundry, Waterloo, N. Y. It is double acting, with dies for both pipe and tile of various sizes. It is capable of moulding 5000 tile per day. It may be worked by hand, horse, or steam power. The price is $250 with two tables, or $225 with one table—all the dies included. [6-1t*] JOHN PURDIE.

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Kell's Premium Horse Power and Threshing Machine.

THE New York State Agricultural Society, at the last Fair, awarded to the Horse Powers manufactured by the subscriber at the city of Hudson, the

FIRST PREMIUM,

they having been presented for competition by Messrs. Emery & Co., of Albany, who, within nine months past, have sold over 125 of these Powers.

The attention of Farmers throughout the country is therefore solicited to the Railway Horse Powers and Overshot Threshing Machines with the Vibrating Separators, as now manufactured by the subscriber, PHILIP H. KELLS, who is the first and original inventor of the present improved mode of constructing these Powers, and who has been constantly engaged in the manufacture and sale of Horse Powers, Threshing Machines, &c., for the last ten years. On this account with his facilities for carrying on the business and his knowledge of the wants of the Farmers of this country, he is satisfied he does and can execute this kind of work in a manner not to be excelled by any manufacturer in this country.

For the details of my mode of constructing the Railway Horse Powers, reference may be had to the advertisements and illustrations published by Messrs. Emery & Co., of Albany, in the Cultivator since June 1850, at which time I commenced manufacturing for them.

All persons wishing to purchase Horse Powers or Threshing Machines of the latest and most approved construction are requested to call on, or forward their orders to the subscriber at his manufactory, on State street, Hudson, or at Griffith's Long Wharf, Buffalo, N. Y.

PRICE OF MACHINES.

For Two Horse Machines,.......... $145 00
For One " " 120 00

Machines will be shipped to any part of the United States or the Canadas, ☞ and warranted to give satisfaction to the purchaser, or they may be returned within 60 days.

June, 1851. PHILIP H. KELLS.

New Oxfordshire Bucks For Sale.

THE subscriber has a number of yearling and two year old Bucks which he will sell any time when called for, and has no hesitation in saying that this breed of Sheep are superior to all others, for large carcass, heavy fleece, early maturity, and constitution, and defies competiton with all other breeds for profit. This flock, which has been bred from some of the best ever imported, is so well known they need no further description than to say that the sire clipped 18 lbs. of washed wool, and weighed 361 lbs. alive. Gentlemen are invited to call and see for themselves, or communicate by mail. Direct to CLAYTON B. REYBOLD,

[6-4t] Delaware City, Delaware.

For Sale.

A FARM in the easterly part of Walworth Co., Wis., on the plank road leading from Racine to Janesville. Said farm is well located in a healthy, pleasant and thriving part of the State, and is well calculated for a large farm, or it can be conveniently divided into three or more small ones, and each be well supplied with wood and water. The general surface has an inclination South and East.

In the center, where the buildings are now located, there are four or five hundred fruit trees, of the various kinds. Some have commenced bearing, so that the occupant now enjoys a comfortable supply of delicious fruits. There are about 200 acres under the plow.

In fact, so far as good roads to important places—Mills, School Houses, nurseries, &c.—are concerned, this place is as well located as we could desire. But as no one will purchase upon the strength of this notice without first viewing the place, it will only be necessary for one to call and satisfy himself, when a trade can be made on accomodating terms.

Any information can be obtained in reference to the same, by addressing A. G. COLE, at Burlington, Racine Co., Wisconsin.

June 1851. (6-2t-8*)

"SPEED THE PLOW."

Genesee Seed Store and Agricultural Warehouse.

THE Subscriber's beg leave most earnestly to call the attention of the farming community to the fact that they have just received a supply of the popular and modern improved implements used in Agricultural and Horticultural pursuits.

They would particularly invite all interested, to the well established Mass. Eagle Plows, in a series of 24 different sizes, manufactured by Ruggles, Nourse & Mason. Also the latest and most approved kind of Seed Planter, invented by the same firm.

We have also on hand the well known Curtis or Albion Plow, of various sizes and extra manufacture.

Wheeler's Horse Power, Thresher and Saw Mill.
Hussey's celebrated Grain Reaper.
Pennock's Wheat and Grain Drill.

As also a complete assortment of Field and Garden Seeds, both domestic and imported. J. RAPALJE & CO, Irving Block,

June 1851. 65 Buffalo st., Rochester.

For Sale.

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THE GENESEE FARMER,

VOLUME XII, FOR 1851.

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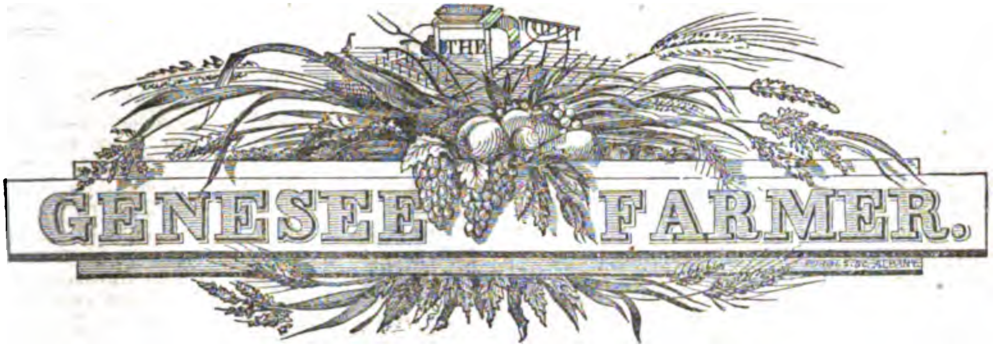

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—JULY, 1851. NO. 7.

POTATO CULTURE AND POTATO ROT.

We are obliged to our friend and esteemed correspondent, "S. W," for his critical remarks on the "Potato Rot," as it gives us an opportunity to explain more fully than we yet have done, our views of this malady, and the best means of prevention, by the more skillful culture of an important crop. First, let us consider the origin of the disease. It consists essentially in the premature decomposition of the organized elements in the tubers, which artificial agencies have developed, for the fact should not be overlooked that wild plants growing indigenously, produce but few, and they very small potatoes. Their preternatural enlargement by cultivation, may give to the tissues of the parts so affected, a degree of tenderness analogous to what is called "proud-flesh," or the excessive accumulations of fat in the systems of animals. A race of long pampered sheep, horses, or horned cattle, is vastly more susceptible to injuries, and subject to diseases, than wild animals belonging to the same species. The more artificial the treatment, and the wider the departure from nature's standard, the more feeble the vital force within, and the more potent all adverse influences without.

In our humble judgment the causes of the potato rot are as numerous as those that induce disease and death in animals. Life and death, whether in a plant or animal, are phenomena of the causes of which we know nothing. Why they should die so soon, or live so long, or live or die at all, is a secret not likely to be revealed by science. Nevertheless, we know that some substances operate as poisons, others as aliments, and that all living beings may be starved to death from the lack of suitable food. We know also that some diseases are constitutional, and extend from parent to offspring; and that others are temporary, and affect the individual alone. In testing the hereditary vital strength or constitutional power of different seeds, it has been found unequal—feebleness begetting feebleness, and strength strength, to a degree that enables 1000 seeds of corn, well-treated for several generations, to produce a third larger harvest than a like number of seeds long ill-treated—both kinds having equal advantages of soil, culture and climate. These remarks will apply to potatoes, wheat, and other plants. To plant the seeds of potatoes which have suffered from bad treatment through ten, twenty, or thirty crops, or generations, by no means secures the benefit of a sound constitution to start with as the head of a new family. Seedlings, however, are preferable to buds or sets, and we advise all potato-growers to save seeds washed clean from the balls and dried in the shade soon after they are ripe. We have undertaken to procure five pounds for Mr. Bodisco, the Russian Minister at Washington, and as many more for Baron Von Gerolt, the Prussian Minister, to be sent to their respective Governments. These gentlemen take a deep interest in agriculture, and if any reader can save a few pounds, or a pound, of potato seeds, they may be franked to the Commissioner of Patents, for the agricultural department, and will be paid for, or other valuable seeds sent in return or exchange.

We do not suppose it possible always to prevent the premature extinction of vitality in potatoes, and their speedy dissolution thereafter, any more than it is possible to avoid all untimely frosts, the attacks of rust and mildew, or the death of children. Nor can we appreciate any peculiar mystery in this fact, as nature operates by general, not partial, laws. If medical science shall ever approximate perfection, it will be by *preventing*, not *curing*, maladies. To prevent the potato disease, all the conditions necessary to a healthy growth of the stems, leaves, roots and tubers of the plant must be complied with, from generation to generation. We know a lad not twelve years of age, and perfectly temperate, who suffers much from the gout, a disease of which his father and grandfather died. Many noble families have become extinct from the misconduct of progenitors; and the same law extends not only through all inferior animals, but to the lowest plants endowed with life. That is, if the living principle is mal-treated, the organized matter which it pervades, returns more speedily to its original elements. To apply a good deal of putrescent manure to feeble potato plants, is like treating indigestion with a double meal of pickled clams.

In the way of a postscript, S. W. gives the following information: "Since writing the foregoing, I have seen Joseph Wright. He said that about one-third of his crop rotted, and the other two-thirds averaged considerably more than 250 bu. per acre of large, sound potatoes. Twenty-five two horse loads of soap-boilers ashes were applied to the acre, with as many loads of well-rotted stable manure. He is decidedly of the opinion that *the ashes alone saved the crop, as where most ashes were found in the hill, the potatoes were the largest and best.*"

Those who have read this journal during the last six years, need not be told how "decidedly" the opinion of Mr. Wright, founded on experience and observation, coincides with our own. In 1845, when the potato malady was first seriously felt in New York, it so happened that the writer spent the summer months in giving public lectures in different counties and naturally took pains to learn the circumstances most favorable to the rot, and those where the disease did not appear. In most cases, the lack of alkalies in the soil was connected with the premature decay of the tubers; in some instances, however, we found insects preying injuriously on the stems of plants. Had Mr. Wright applied 25 bu. of unleached ashes instead of as many loads of stable manure, to the acre, in addition to those from the soap factory, it is more than probable that his potatoes would all, or nearly all, have been sound. A farmer should be content with 300 bushels of sound potatoes per acre, and such crops were grown in 1850 by the aid of forest leaves and lime. The latter was spread broadcast and harrowed in at the rate of sixty bushels per acre, while moist leaves and a very little earth covered the seed planted in drills or rows, one way only. When forest leaves decay and yield their organic and inorganic constituents, 100 lbs. furnish about six times more alkaline salts than a like weight of rotting wood. Hence, if a farmer had his choice to apply a ton of rotten wood, dry weight, or a ton of leaves, equally dry, as a fertilizer, the latter would be worth six times more than the former. To feed potato plants with the highest success, one needs to understand the composition of every substance grown on the farm, whether in the woods, in pastures, meadows, or plowed ground. Fortunately, the laws of God are unchangeable, and have never to be learned but once, although they should be obeyed always. Instead of carefully studying the laws which govern the healthy organization of plants and the improvement of domestic animals, there are at this time not less than four millions of farm operatives at work in the United States, in violation of one of the plainest duties that Providence imposes on man, who is the only animal that impoverishes the earth. Not one agriculturist in a thousand has a clear idea of the elements of grain, provisions, wool, cotton, tobacco, potatoes, hay, and other crops, which exist in an available form within two feet of the surface of the earth; nor of the quantity of these elements of food and clothing annually removed from American soil, over and above what domestic animals take out of fields in their stomachs, and what are carried off in crops.

We affirm, without the fear of successful contradiction, that subtract the total consumption of the people of the United States in the year 1851, from their total production in said year, and the surplus will not pay sixty cents a day for the labor necessary to replace in the earth as much potash, soda, magnesia, lime, sulphur, phosphorus, ammonia, and chlorine, as the sixty millions of acres most exhausted will part with in a twelve-month. It is a great and sad mistake to regard our planting and tillage labor as *productive* industry; it is emphatically the most *destructive* that can well be imagined. We have been two centuries exporting potash and pearlash, and wasting the same in soap-suds and manure at home, every pound of which came from the soil that now needs alkalies above all things. More than a moiety of all the incombustible matter in a mature potato plant is potash; and at least a third of the ash in every seed of wheat grown in the Union, is the same alkali.

Pigeons scratch the surface of the earth, fill their crops and fly away; squirrels have holes and work industriously at their autumn harvest, to garner up a fair stock of nuts for future consumption; and man too, waxes fat by simply extracting the elements of bread and meat from a virgin soil, which he never placed there, and *intends never to return.* He assumes that God created fertility for the present generation only, and that the one hundred millions of souls who will be in this Republic fifty years hence, and before our children shall be off the stage, can have no possible rights nor interests in the continued fruitfulness of the earth! A tree is known by its fruit, and men must be judged by their uniform conduct. The policy which we condemn with so much earnestness, has diminished the population of Ireland nearly two millions in the last decade; and it was the leading, all-controlling cause of the downfall of Babylon, Palmyra, Tyre, Carthage, and Rome itself. Who does not know that there are many millions of acres in this young agricultural nation which have been bled, and skinned, and finally abandoned, because they have been insanely robbed of their alkalies, their phosphorus, and available sulphur? The most pains-taking researches and estimates show that at least ten thousand dollars worth of the elements of fertility are daily washed into the river Thames from London, while laboring people are fleeing from the United Kingdom by hundreds of thousands, annually, to escape hunger and starvation. Belgium is the most densely peopled and the happiest nation in Europe, and simply because her farmers have the common sense to make the excreta from each inhabitant worth to the land an average of five dollars a year. At this rate, the nightsoil annually wasted in the State of New York is worth the trifle of fifteen millions; and the soil from which all this fertilizing matter is drawn, cannot but be growing poor and poorer as time advances. Suppose all the potash annually wasted in the State of Ohio and exported therefrom, was put in one heap, and all that is imported placed in ano[illegible] how would the two compare in size and weight? [illegible] each cubic foot, or 100 lbs., of her soil, there may be an ounce of potash available for the organization of starch in potatoes, wheat, corn, and other crops. Thirty years hence, when this fertilizer and all others are mainly consumed, from what source will the farmers of the Buckeye State obtain three or four thousand tons of potash needed to make the crops of a single season? Can they go to the city of Cincinnati and gather up the alkalies that have been washed into the Ohio river in the preceding half century? Will Lake Erie give up the raw material of human food that Detroit, Toledo, Cleveland, Erie, and Buffalo have poured into it? The people of China save the potash in the soap with which a man is shaved, and the ammonia (another alkali) in his beard also. Potash is worth, even in this country, six dollars per 100 lbs. for agricultural purposes, and ammonia is worth double that sum. When shall we begin to study rural affairs as a useful science, establish agricultural schools, and think as much of knowledge as we do of new carriages, carpets, or pianos? Five millions of farmers, and not an agricultural college in the thirty-one States! Fifty millions annually expended by Congress, and not the first dollar appropriated to promote agricultural science! We begged and prayed for the pittance of $200 to try experiments in the culture of potatoes, corn, and wheat, and the preparation of nightsoil, for the common benefit of all that till the earth, but not a dollar could be had. While Congress publishes 130,000 volumes a year of agricultural reports prepared by the writer, it insists on keeping the light of science out of these books. We are compelled to look to England, France, and Germany, for knowledge that ought to be fostered and developed under our own free institutions ; but so long as American farmers send selfish politicians, instead of statesmen, to their national legislature, there can be no change for the better. The writer has thrown away ten years hard labor and accomplished next to nothing, from the lack of $10,000 which the Legislature of his native State might have granted without the least inconvenience. To *increase* knowledge, as well as to *diffuse* it, is an object worthy of any man's ambition. But there is not one experimental farm in all the New World to bring to light the laws which govern the healthy organization of potatoes, or any other crop grown in America. What Agricultural Society has given the first dollar to aid any gentleman in his critical study of soils? His time, his apparatus, and his chemicals, all cost money ; but he is expected to work for nothing and find himself. Public Opinion, the seeds of which are now being scattered broadcast over the land, will order things differently in the next generation. In our time, the great work of impoverishing the soil will never be less than it is in the year of Grace 1851.

"WRETCHED PASTURAGE."

In volume eleven of the Journal of the Royal Agricultural Society, we find remarks on "wretched pasturage," which vividly brings to our recollection many a sterile field, valuable only for starving the animals doomed to subsist thereon. Judged by its results, one might say that the art of tillage and husbandry consists in making one spire of grass grow where three grew before. Our author says : "In Ireland, after an exhausting course of potatoes and oats, the ground is left out '*to rest*' for several years." While the soil is "resting" the people of the "Green Isle" are expatriated by hundreds of thousands. To cure wretched pasturage, and prevent the constant increase of the like, a better system of agriculture must be universally practiced. Limeing, reseeding and manuring, are the remedies most successfully used in Great Britain. We hope Professor EMMONS of Albany will soon bring his recently discovered phosphate of lime (apetite) into market. It is said to contain over 90 per cent of pure phosphate. The New Jersey mineral is equally valuable. We have just analyzed two specimens of gypsum, one from Alabama and the other from Tennessee, and from recently discovered beds ; both of which are equal to Nova Scotia plaster. We have a sample of nearly pure carbonate of potash from Utah, which is from a mineral spring that yields it abundantly. So soon as a railroad shall be built to the Rocky Mountains, potash will be an article of export. In Texas, there is a salt lake, yielding minerals so cheaply that they can be used for agricultural purposes. Should this natural deposite contain considerable potash and magnesia, as well as soda, it will be very valuable to renovate old pastures. If one could procure ashes enough to give all his fields a top-dressing, it would improve the herbage immensely ; but ashes are not to be had in any large quantities. Probably the subsoil is the most available source from which to draw the mineral elements of clover, timothy and other grasses, on farms that afford "wretched pasturage." Marl, salt and lime, bone dust, shading the ground with straw and forest leaves, which rotting, form manure, are all popular and often efficient remedies. Every farmer who can should save grass seed, and always have a little on hand to apply to places that need it. American pastures and meadows yield on an average, about one-fourth as much feed as they ought to produce, take one year with another. We have often thought that a cow's eyes should be at least as big as her belly to see grass enough to fill her stomach once a day on farms that we have visited.

MIXING GYPSUM WITH MANURE.

In the June number of the American Farmer published in Baltimore, the Editor devotes over twelve pages to the discussion of the propriety of mixing gypsum with guano and other animal excretions, or manures. A correspondent had condemned the practice on the ground that the strength of guano and the dung of domestic animals, was greatly impaired by the addition of plaster. As may well be supposed, the evidence in favor of mixing gypsum with putrescent manures is overwhelmingly abundant. Those that use plaster should know that if it be spread over the excrements of horses and cattle in stables having plank floors, the latter will soon give way by the corrosion, or rotting of the wood, and a valuable horse may break a leg in breaking through a plank on which he stands. Accidents of this kind have happened.

Incidentally the Editor of the Farmer copies the remark ; "that a plant growing in a glass vessel, will decompose the glass to obtain the potash which enters into its composition." This is an error which has been handed down in our profession some years, from one to another. Glass is often corroded in soils, but not by the roots of plants that may happen to be in contact with it, but by *carbonic acid*, either from mould or from the atmosphere and rain-water. Glass tumblers used to drink Congress water, so highly charged with carbonic acid at Saratoga, soon part with their clearness and become rough from the chemical action of said acid. The chemical changes that transpire about the roots of the plants, are mainly, if not entirely, independent of their presence. It is true that their pores and cells present unequal facilities for dissolved salts to enter into general circulation through them — a fact for which no sufficient reason has been found. The growth of a plant, from the first expansion of its germ to full maturity, and the passage of nutritive matter through the walls of minute cells and along continuous canals or tubers, from the extremities of roots to the extremities of leaves, and from the leaves to the roots again, present phenomena which we intend to discuss at some length in future numbers of this journal. The inside work of plants and animals should be better understood.

QUANTITY OF SEED WHEAT PER ACRE. — Mr. R. B. WOLFE, near Newport, England, has tried many experiments with different quantities of seed and different width of drills, the upshot of the whole is that six pecks of wheat planted in drills eight inches apart gave the best returns on strong clay lands. — We suspect that the berry of this wheat is something like a third larger than seeds of white wheat generally sown in this country, and consequently six pecks form no more plants than four would of smaller grain. It is important that seed be covered at a uniform depth — a result best attained by the use of a good drill.

CULTURE AND USE OF THE POTATO.

Eds. Gen. Farmer:— Please permit me to give your readers a short history of this valuable root, also of its culture and use.

We are indebted to South America for this article, where it grows wild, and where it was cultivated long before it was made known in Europe. Clusius is the first European writer who mentions it, about the year 1588, and from this period it spread into different parts of the Eastern Continent with greater or less rapidity. The potato has been cultivated in Suabia and Alsace only since 1720, and did not reach Switzerland till 1730. Almost everywhere its introduction met with a great deal of opposition. The French especially were excessively prejudiced on the subject, and it was not till a time of scarcity, during the revolution, had fastened it upon them, that its culture became general. The potato has probably added millions to the population of Europe, and for a long succession of years rendered unknown those distressing famines which had previously been so frequent.

In addition to the usual culinary uses of potatoes, bread may be made by mixing with them nearly an equal portion of wheat flour; and also a kind of cheese, by reducing them to the consistence of paste, adding an equal quantity of curd, with a little salt, and some other ingredients, mixing the whole together and forming it into moulds. Alcohol is very extensively distilled from the potato in some parts of Europe. Starch may be made by the simple process of scraping them into water and well washing the pulp, when the starch settles to the bottom in a heavy and dense sediment. This starch is not only used for the same purposes as that prepared from wheat, but also as a size, which does not putrify like that produced from animal substance, and has no disagreeable smell. Yeast may also be prepared from the potato, and even the seed-vessels may be made into a pickle.

As food for the cattle of the farm — horses, cows, pigs, and likewise for poultry — potatoes are all but invaluable. Every creature seems to relish them, particularly when they are steamed or carefully boiled.

Previous to the appearance of the *rot*, and now, where that malady does not injure the crop, *potatoes* are the most *valuable* and *profitable* crop a farmer can raise. The manure used may be of the coarsest kind, and still an amount of fruit is yielded almost incredibly large. A few of these cases may be stated which will at least show the capabilities of this plant under circumstances the most favorable:

Mr. Knight, the President of the English Horticultural Society, a few years since, obtained from an outside row a produce equivalent to more than fifty-eight tons per acre. He says that "single rows and outside rows are usually more prolific than the interior rows of a plot, garden, or field. This depends on a variety of circumstances, the chief of which is the more perfect exposure of the foliage to the agency of the air and the light."

The Bauff' Journal, published near Aberdeen, in Scotland, mentions that a gentleman in Bauff, in the spring of 1848, received a quantity of potatoes from Rotterdam. He took a small parcel and planted them in his garden. The plants very soon appeared, and through the summer continued to grow most luxuriantly, so that all who saw them, predicted that they would be nothing but a thicket of stems and leaves. The prediction however, was not verified; for when the crop was dug, there were gathered from the ground, which was 160th part of an acre, four bushels and a half; being equal to 720 bushels to the acre. At several of the stems upward of forty potatoes were found; one had 63 full-grown potatoes, and on another were counted the very extraordinary number of 110. They were entirely free from disease.

Mr. Thacher Clark, another Scotch gentleman, has raised from a plot, a crop which was equal to 960 bushels to the acre. And one of our own countrymen, a few years since, Col. Griggs, of Brighton, Mass., dug from one acre of land 800 bushels of fine English Whites, some of which weighed twenty ounces, and all of an excellent quality. The common field crop does not rise above 200 bushels to the acre, and oftener below that.

I say nothing in regard to the mode of cultivating the potato, for I presume this is a matter with which all are familiar. And if, among the different modes of doing it, some are preferable to others, changes will be adopted by those who wish to make them, according to convictions resulting from experience and observation, and not from any written details in agricultural books. In this case, therefore, as in others where the subject must necessarily be familiar to the reader, I pass it over in silence.

It may doubtless be expected that I shall discuss the causes and the remedies of the potato disease. This I can not do satisfactorily, as both are matters yet to be ascertained. The sensible editor of the Agriculturist says: "We are constantly receiving communications on the cause and remedy of the inexplicable disease of the potato, often contradictory in themselves, few if any of which are without exception. By one class the cause of the malady is attributed to parasitical fungi; by another, to insects or worms; a third, to exhausted vitality from long cultivation; a fourth, to an improper use of ammoniacal or stimulating manures; a fifth, to the want of lime in the manure or soil; a sixth, to drouth; a seventh, to a superabundance of rain; an eighth, to a deficiency of electricity in the atmosphere; a ninth, to an excess of electricity; and by a tenth class, to a miasmatic or some unknown agency, the mode of action of which it is beyond the human preception to comprehend."

Among the numerous remedies which have been recommended, those, says Mr. Allen, that seem to merit attention are, the production of new varieties of seed, early planting, followed by early harvesting, and securing the crop from the wet and frost, and, lastly, what he suggested three years ago: namely, planting on moderately rich, warm land, having a good sod, with no manure but plaster, charcoal-dust, wood ashes, salt, or air-slacked lime.

It seems now to be pretty well settled that early planted potatoes escape the rot more generally than late ones. Potatoes are a long while in coming up, and they may as well be planted in April as at a later period, for all planting can be done at once.

Greensward is not the best kind of furrows for potatoes, unless the sod was turned as early as the last of October. For when it is turned in the spring, it is more subject to the drouth than old ground, or ground plowed early enough last October to be partially rotted and made to be compact enough to attract moisture from below.

If the sward must be turned for potatoes in the spring, it should be well harrowed, to prevent excessive drying. Mr. **Wm. O'Grady**, of Southborough, says "he had not rot in his potatoes last season, and he ascribes it to his mode of treatment. He put one hundred loads of peat on each acre of his land in the fall previous, and last spring he planted, and put a shovelful of peat ashes to each hill. He did not have a heavy crop. but had about 150 bushels to the acre. More trials may be necessary to determine whether peat ashes in the hill are an infalliable preventive of the rot."

In 1847, a correspondent of the Agriculturist makes the following remarks on the renovation of the potato,as it is termed. He says, "A potato that will not produce more than 150 bushel to the acre is not worth the farmer's attention, much less if it be in a diseased state; and, in my opinion, the old potato is not worth redemption from disease, even if it could be effected. The world I conceive is in immediate want of new varieties—*new* from their origin, from their seed—*new* in quality and productiveness. Such potatoes have been produced, and are in advance of the old crop in every important particular. They are cultivated by several persons in Europe, as well as in this country."

A gentlemen in Germany, near Hamburgh, says he practied raising potatoes from seed for fifteen years, and obtained splendid varieties, which are not attacked with disease. I have known the same method to be practiced, and through my own observation relative to experiments and facts, I am fully convinced that this is the true course to pursue.

I know of some who intend to plant large quantities from the seed of seedlings this season. Those who wish to improve their seed, and prevent the *rot*, should gather seed from the balls which grow on the vine in great abundance. Half an ounce of seed will plant a quarter of an acre. Those who try this process will find every year's experiment will bring the tuber and its seed in advance of its former condition. **Charles W. Hobart.**—*Yatesville, N. Y.*, 1851.

S. W.'S NOTES FOR THE MONTH.

Draining-Tile and Draining.—An editorial request is made in the June Farmer that some one in Seneca county would give the price of tile, and cost of laying them. **Whartenby**'s price for both pipe and tile, delivered at the Canal or Railroad depot at Waterloo, is as follows:

2 inch Pipe,	$10 per 1000
1½ " "	9 " "
4 inch Tile,	15 " "
3 " "	12 " "
2 " "	10 " "

Thirteen and a half pipe, or tile make a rod; hence, it costs 13½ cts. to lay one rod of two inch pipe or tile after the ditch is dug. The expense of digging a ditch three feet deep, depends on the soil and the presence or absence of stone, hard pan, &c. Here is an Irishman who has followed ditching in Dryden, Tompkins Co., who says that the price of digging *blind* ditch there, was "two shillings a rod, and boarded;" the digging was fourteen inches wide on top, ten at the bottom, and two and a half feet deep. He thinks that ditching in this county can be done much cheaper than in Tompkins, as here there is comparatively no stone or hard pan, and consequently the pick may be dispenced with. In laying pipe, the last six inches in depth may be made very easily, and at little expense, by the aid of a pointed or graduated spade. Where tile is laid, a thin board to place them on is found to be much better, and more stable, than the short, earthen, often warped, shoes; but where the bottom is hard, no shoeing is necessary; the two inch pipe, however, is now generally preferred to the horse-shoe tile.

The advantages derived from draining, were never more apparent than at this wet and backward season. Indian corn may now be seen *ten* inches high, green and thrifty, on an under-drained field, while in every other location it is of a sickly yellow. The nearer the drains are together, the better, as draining by taking off the excess of water, keeps both surface and subsoil friable, and enables it to absorb by capillary attraction all necessary moisture. **Whartenby** has already sold his large stock of ready baked tile, but as he is soon to set up one of **Purdies**' improved machines, he can fill all orders after the 20th of July.

Plaster.—F. **Williams** asks whether plaster when plowed in, is useful to vegetation. On the highlands of Chatauque, where there is no limestone, plaster may become a substitute for carbonate of lime in the soil. But **Liebig** tells us that the great value of gypsum, and other salts of lime, is in the fixed condition they give to ammonia in the soil · hence the value of gypsum when mixed with the decomposing manure of the stables, in the open air; when dissolved by water, its sulphur unites with the escaping ammonia, changing its nature from a volatile escaping carbonate to a sulphate, "in which fixed state not a particle of it is lost to growing plants." —**Liebig**'s Ag. Chem., page 53. But as it takes four hundred times its weight of water to dissolve gypsum into a form to be decomposed by the carbonate of ammonia, it should always be sown in winter or early in the spring, to benefit the crop of the season.

Some writers have supposed that **Liebig** gives too much importance to plaster as manure, because its action is not everywhere perceptible, like that of animal manures. On the sea-coast it has no beneficial effect, and many practical farmers in the interior, contend that it has no effect on some growing crops. But it is sufficient that plaster does produce, in certain situations, all the effects he has ascribed to it. The day is not yet when man is permitted to unravel, or even account for all Nature's mysteries.

The Difficulties of Chemical Analysis.—It has been asserted by some chemists, that spring water is entirely free from the carbonate of ammonia; but **Liebig** says that the super-carbonate of lime in spring water liberates the ammonia, and it is lost in the air in the process of analysis. In the same manner, many of other volatile substances are lost. **Boussingault**, in treating on the properties of milk, says that the chemical composition of milk varies very little when the cow's food is changed, and that "chemistry is powerless in detecting the volatile principles which give the agreeable flavor to milk and butter."

The Season and the Crops.—The season, thus far, is wet, cool, and backward, although we have had no injurious late frosts. Hay promises to be a large crop; wheat looks well; it is rather wet for barley, oats, and corn, unless it is on well drained, well manured fields. Farmers begin to talk much about under-draining; they see its magical effects at this particular time, and none but him who is determined to die game in the slough of traditionary practice, can resist occular proofs, however faithless they may be in *book* prescriptions. High farming is daily gaining new converts. The day is coming when the farmer will know how to overcome most of the disadvantages of adverse seasons, and to obtain good crops from an improved and improving soil. S. W. —*Waterloo, N. Y., June,* 1851.

THE CAUSE AND THE REMEDY.

Eds. Gen. Farmer :—The sentiment expressed by Professor Johnston, and published in the January number of your paper, "That the farmers of New England are eighty or ninety years behind those of Scotland, in the state of agricultural improvement," seems to be corroborated by other very intelligent tourists. That such should be the fact will appear most extraordinary, when it is considered that the soil and climate of New England, if not superior, is certainly not inferior to that of Scotland, her yeomanry equally intelligent, education more generally diffused among them, and being proverbial for ingenuity, industry, and enterprise, are not inferior to any people in any of the arts of war or peace ; that there exists a radical cause for the inferior state of agriculture in New England as compared with that of Scotland, there can be no doubt ; that that cause may admit of a remedy, we have reason to hope : but that the true cause must be discovered before the remedy can be applied, is too evident to admit of controversy. Professor Johnston gave his opinion as to the cause, other travelers have given theirs ; each differing from the other, and all, in my opinion, erroneous. As you had promised, I waited with solicitude and read with interest your opinion on the subject, as published in the February number of your paper ; and though I heartily accord in much you say in that number, I do not think you have given us the reason why the state of agriculture of New England should be inferior to that of Scotland. I would like to see a further expression from you and your correspondents upon that subject, and I will then hazzard an opinion upon it myself. I am a subscriber to your paper, and am, and have been for a long period, a subscriber to other agricultural papers ; and while yours is the cheapest, I believe it not to be inferior to the best published in our country. I concede that your columns are filled with matter of the highest interest to the farmer, and yet I think there is no subject to which you can more profitably give a place, than to a discussion of the subject under consideration. An Old Farmer.—*Hillsdale,* 1851.

That the people of New England, and of the States generally, are at least as intelligent as those of any other portion of the globe, is a fact in regard to which there can be no dispute. But the subject of agriculture has been long neglected. It has been considered a matter of too little importance to attract the attention of scientific men. And when the light of science has shone on the farmer's path he has too often treated it with contempt, preferring to continue groping his way in darkness. Farmers have had no respect for their calling—no just notions of its importance. If a farmer has a son of an inquiring mind, who wishes to search out the *why* and the *wherefore* — who will not rest satisfied without searching for the *cause,* when he observes the effect, he is too smart for a farmer, and must be sent to some city, for a lawyer, or a doctor, or to engage in commercial speculation. Indeed, the young have no relish for a blind system of farming. But when our young men see that the operations of the farm call for scientific acquirements, as well as for practical skill—that it affords scope for the closest observation, and the greatest powers of the greatest minds—and that distinction, honor, and wealth await the skillful farmer—then they will engage in it with an enthusiasm that will elevate American Agriculture to its true position.—Eds.

FOREST TREES.

Messrs. Editors :—I read the Farmer with much interest, although not engaged in agricultural pursuits. It is a satisfaction to me to know that "there appears to be no abatement of the tree-planting spirit," although it appears to be mostly confined to fruit trees. Not that I am averse to the multiplication of fruit trees, to any extent that may be desired, but I should also rejoice to see public attention turned more than it now is, to the cultivation of forest trees, especially in situations in which they now appear to be growing scarce.

The idea of a country being stripped of its forests, is horrifying to me. I have lived to see that part of the country in which I was born, changed, not "from a barren wilderness into a fruitful field," but from a *beautiful* wilderness into an almost *barren* field. I refer to the destructive *waste,* not the necessary use, of timber, and the subsequent ruinous system of farming. The little remaining timber is almost the only thing convertible into money, and yet there is less of that than will be necessary to supply the present and coming wants of the inhabitants.

And yet my native place is not the only place where the same selfish, injurious, and ruinous policy has been pursued. In almost all parts of the country the land is fast becoming stripped of its "glory," not to satisfy the necessary wants, but to gratify the cupidity of men who seem to think that the only object of life is to hoard up wealth, regardless of consequences to the world. But I have neither time nor inclination to pursue this subject in all its legitimate details. Suffice it to say, that it is no longer a disputed point whether a country suffers from the destruction of its forests.

Before I close, allow me to address myself briefly to those who have it in their power to remedy the evil, both by prevention and cure, viz.:

TO LAND OWNERS.

The growing scarcity of timber is beginning to be felt, and the inquiry is sometimes made, "What will be the consequences to coming generations ?" I need not stop to answer this question, but will simply remark, that it is well known that in very many portions of our widely extended country, timbered lands are far more valuable than those under cultivation. Hence the owners of land have it in their power to increase its value by making provision for the wants of future generations. This ability consists in two things : 1st, In avoiding all unnecessary waste and destruction in the use and management of timber ; 2d, In cultivating a new growth, by sowing or planting the seeds, and preserving young trees of all those varieties of forest trees that are useful for fuel, building, or other economical purposes. Wherever a tree will grow without absolute detriment, there set a tree or plant a seed. Trees will grow while you sleep, and will be like money at interest. Plant them, then ; your children will be benefitted, if you are not ; and coming generations will bless your memory. Commence this very season. If too late to sow the seed, or to transplant young trees, take up those that you may find coming up from last year's seed, about the fields. Remove them, with a little clump of earth, to a sunnier place, *and let them grow.*

If you would save our country from becoming a desert, plant and cultivate trees, and preserve those you have from an unnecessary waste.

If you would increase the present and prospective value of your lands, plant and cultivate trees.

If you would contribute to the beauty and healthfulness of your country, plant and cultivate trees.

If you would benefit yourselves, your children, and posterity, plant and cultivate trees. H. — *Down East, May,* 1851.

SUMMER-FALLOWS FOR WHEAT.

Messrs. Editors : — Summer-fallows are too expensive for me, taking two or three plowings and from three to six harrowings, and after all having to wait a year for the pay. I go for plowing but once for a crop ; yet, if land is rooty or stony, fallowing must be resorted to, in order to fit it for a crop.

Now, as I have charged fallows with being expensive, it lies upon me to show a plan which is cheaper. It is this : Plow clover sod as deep as it can be well turned over, and sow with oats ; and as soon as they are harvested, harrow the land in order to start the scattered oats to growing, and when growing sufficient for the plow to destroy them, plow again and sow with wheat. Now, this I have tried, with some slight variations, for two or three years, and that without manure, and I find my wheat crop is nothing behind what it was when I fallowed for it. My oats also were fully an average crop. Here are two crops with but little more than the one raised on the fallows, which I have described.

There is another good way of raising wheat, which is cheaper than fallows. Plow clover sod as soon after harvest and as deep as possible. Prior to this, the clover may be either mown or pastured. — Two or three weeks after it is plowed, take the harrow, or what is better, the cultivator, and pulverize the soil completely, and sow your wheat.

These plans are not entirely new, but have been practised by some for many years ; yet a great majority of farmers, in this neighboorhood at least, raise their wheat on fallows. I have commenced to practice a four course shift, which is—first year, oats and corn on clover sod, with ten or twelve two-horse loads of manure per acre ; second year, wheat and clover ; third year, clover mown ; fourth year, the same pastured. J. W. P.—*East Brook, Pa.,* 1851.

Horse Beans — (*Vicia fabia.*)—The ash of this kind of beans as recently analyzed gave 2.650 sulphuric acid ; 36.099 phosphoric acid ; 25.456 potash ; 20.675 soda ; 2.101 common salt ; 3.065 lime ; 9.861 magnesia ; 0.061 oxide of iron ; 0.032 silicic acid. This analysis by T. J. Herapath, shows that phosphoric acid, potash and soda, form over 82 per cent. of the earthy matter in horse beans.

Judging from the results of the last analyses of the ash of rye, common salt and lime will operate very favorably on this crop. It contains 20 per cent of soda and over 11 of lime.

Among the natural causes which affect vegetation, the influence of temperature is the most obvious.

TO DESTROY SORREL, &c.

Messrs. Editors.—There are some farmers in Michigan troubled with sorrel, growing in their fields. They have solicited the Editors of the Michigan Farmer to tell them how to kill it. He told them sorrel only grew on poor land, and if they would make their land rich, sorrel would cease to grow. Some of his correspondents refuted the Editor's theory and showed that sorrel grew on rich as well as poor soil. My opinion is that all land where sorrel grows is more or less sour. Young clover plowed under previous to blossoming contains perhaps 75 per cent. of sap or water, and has a tendency to create acid in the soil ; plowing under sorrel has the same effect. But plowing under sorrel when in full bloom will kill it ; still, in my opinion, the diseased state of the land remains the same. The soil is sour, and to cure this disease after the ground is plowed, spread a sufficient quantity of caustic lime on the surface to neutralize the acid, and then, with the harrow or cultivator, mix it well with the soil. This will improve the land, and, I think, will stop the further growth of sorrel. Now I have given my views on this subject, and I hope that the "Farmer" will correct my theory if erroneous, and, at the same time, you would render a kindness to some of your Michigan subscribers who are troubled with this pest, if you would inform them how to get rid of it and cure the land, if diseased.

I perceive by reading your correspondence, that the farmers of the Empire State are badly annoyed with Canada thistles, pigeon weed, and other obnoxious plants. We do not grow any such hard cases, in the shape of weeds, in Michigan. June grass is one of the worst pests we have had. To depend upon it for hay or pasture, our cases would be almost hopeless. Red and white clover, mixed with timothy, makes a favorite pasture for cattle and horses. Our mowing ground, well stocked with clover and timothy, turns off in ordinary seasons two tons to the acre. Every season, in March or early in April, our pasture fields and mowing grounds receive one bushel of plaster per acre. The grass and hay feed the stock, and the manure feeds the crops.

Since I have been a resident of this State, I have visited Western New York several times, and have been surprised to see how barren the face of the country looks, compared with Michigan. We have had plenty of rain since the middle of May. All our crops look fine. Our wool brings, at our doors, 35 to 42 cts. per lb. Michigan can't be beat in growing good wool, and good sheep. We are now breaking up a field of 14 acres for wheat. We have used it for a meadow more than twelve years, and it scarcely ever failed in producing two tons of first rate hay per acre. We plow but once, ten inches deep, and finish with a cultivator. Last season we broke up a field only two weeks before seeding time, that had lain about ten years as a pasture field. We plowed once, ten inches deep, and covered the seed with the cultivator, and from its appearance now, it will yield 40 bu. per acre. We applied no manure to either of these fields, except the droppings of cattle and sheep when at pasture. A Subscriber.—*Ann Arbor, Mich., June,* 1851.

Sorrel is a perenial, and prefers a poor soil. Plowing while in blossom will destroy it, and liming and deep plowing will prevent its growth. The sour taste in the weed is caused by the binoxalate of potash.

FLAX—METHOD OF CULTIVATION.

BY WM. NEWCOMB, PITTSTOWN, N. Y.

The importance of this crop to the farmer has just begun to be appreciated, and as it has a few peculiarities in its culture, I shall attempt to give the results of my experience for the last sixteen years. I have been extensively engaged in the raising and managing of flax, and have drawn the following conclusions: First, the soil best adapted to its culture is a rich loam; but it will succeed well on almost any soil, except sand, provided it be high or hilly; it will not grow well on low lands, on borders of streams or rivers; it would not probably succeed oftener than once in ten years, for causes I shall presently state. The seed being small, it must not be placed deep in the ground. I would recommend the ground to be well plowed, and thoroughly pulverized by dragging before sowing, and very lightly dragged or bushed in, after sowing. The earlier sown in the spring after the ground is fit to work, the better.—One bushel of seed to the acre is the best amount of seed to ensure a good yield of seed and lint; if a less quantity of seed be sown, the quantity of seed would be increased, but the quantity of lint would be lessened, and if a little more seed be sown, the lint would be increased but the seed would be lessened. On low lands the flax is subject to mildew or rust, which is of two kinds, the red rust, which destroys both seed and lint, and black rust, which affects the stem of the flax and destroys the lint; this is the great enemy of flax growing; but on elevated or hilly lands it is very seldom attacked with either of these kinds of rust. Flax succeeds best after corn or potatoes, or such crops as have been cultivated the previous year so as to destroy weeds. The ground cannot be too rich, yet it must not be made so by manuring the flax ground with manures filled with seeds of grass and weeds, which would spring up and destroy the crop. Therefore I would not recommend manuring the flax ground the season it is sown, except with the following stimulants and manures, to wit: to each acre of land apply one bushel plaster of Paris, one bushel of fine western salt, one bushel of wood ashes, one bushel of slaked lime, of course varying these manures according to the nature of your soil. If it be a light loam mixed with gravel or sand, leave out the lime; if it be a tenacious soil bordering on clay, or nearly so, be sure and put on the lime. The salt and ashes in the quantity mentioned are not only manures, but a preventive to the operations of the worm, which is often very destructive to flax. Plaster is a strong stimulant, and is invaluable on dry soils by its attractive principles for moisture. The expense of getting in a crop of flax is about the same as oats. The expense of hand pulling usually is $3 per acre; thrashing the seed and cleaning, $1 per acre; dew rotting and taking it up, $1 per acre; and dressing at the mills from $2 to $2.50 per hundred lbs. of flax. The average quantity of seed raised is eight bushels per acre, and the average quantity of flax, 250 lbs. per acre; although this has frequently been more than doubled both in seed and lint. The average price of seed is $1.25 and average price of lint, 9½ cts. per lb.

Water Rotting.—There are two methods of rotting flax, one by spreading it thinly and evenly on our meadows, and is called dew rotting. It is considered sufficiently rotted when, by rubbing the stem and breaking it with the hand, the hurl or lint easily separates from the woody portion of the stem. This is the common process, and requires but little judgment to do it properly. The other method is, by immersing it in water, and as I have rotted by this process many hundred thousand pounds, I may be excused in being a little more particular, more especially as it requires more exercise of judgment, and is a process less understood, and one which much enhances the value of the lint when done. I have been offered an advance of 25 per cent. on the present price of dew rotted flax for water rotted; and, it may be asked, what better is water rotted flax than dew rotted? In answer I state that many articles manufactured from flax are required by government to be made from water rotted flax or hemp, and that the cloth and twines thus manufactured will withstand in warm climates the mildew or rotting, which dew rotted cloth is subject to. After water rotting flax for an experiment, I have left lying on the ground spread, a few bundles for months, without injury to the flax, when dew rotted flax would have been entirely lost. In water rotting flax, it is important that the flax be entirely immersed in water and kept under by heavy weights, and secondly, when sufficiently rotted, it must not remain in the water. It is rotted much better in still water or vats, than in running streams; and I cannot perhaps do better, to give the idea of what ought to be done, than to describe my own pit, which is about 60 feet long by 20 wide and 5 feet deep, which will contain nearly 20 tons of flax in the stem, with a gate at the lower part of the pit, to draw off the water from the flax, and a gate from the pond above to fill the pit with water. The flax is first placed on poles laid on the ground, regularly as it would be in the barn, (I do not think it of any importance to stand it up,) and when the pit is filled and the weights placed on the flax, let in sufficient water to cover the flax. In warm weather, from the 6th to the 10th day fermentation will have taken place, and the flax will rise above the water and remain a few hours, after which it sinks and the process of rotting is then finished. But this process is retarded when new water is added, and then the only way to determine is by the stem. When the lint slips freely from the stem, by drawing it through the fingers, leaving the stem free from the fibre, it is then sufficiently rotted and the vat let off, and the flax immediately drawn out and spread on the land for drying. Of course all flax before being immersed in water must be well bound in bundles with strong bands, the size is not important, but if very large, it makes very heavy handling while wet. I have rotted in this one pit, during the summer and fall 60,000 pounds, and as I observed, the warmer the weather and the water, the sooner the flax rots; and I have had a pit of 3,000 lbs. rot in five days, and I have had, later in the season, the same quantity to remain in the water for 30 days and not be over rotted, and even with all the directions that can be given in this process of rotting, constant watching is necessary and some experience before it can be done safely and with certainty. The flax crop I consider less exhausting to land than any of the cereal grains. It is true the crops do not succeed well sown in succession, but all other crops succeed better after flax than any other, and it is my favorite crop to lay down in grass seeds; and I have uniformly had seed take better after this crop than after any other.—*Trans. N. Y. Ag. Soc.*

THE EXTERMINATION OF WEEDS AMONG WHEAT.

But a short time has elapsed since the idea of hoeing wheat, or any other grain crop except corn, was received in this country with perfect derision; now, however, farmers begin to appreciate the evil of weedy grain fields better than they once did, and, since the introduction of the drill machines, some enterprising individuals have really begun to consider the expediency of adopting the horse hoe also. Many farmers have tried hand weeding for particular weeds, and with good success.

That this proposition, as to the necessity of weeding grain, is not ridiculous, can be easily ascertained, and in a manner to satisfy even the incredulous. Let any person take the trouble to look over such fields of grain as lie nearest to his residence: the charlock, the thistle, the yellow dock, the wild parsnip, and many other weeds, will be found abundant in most situations; while in some sections the Canada thistle monopolizes a lion's share, rendering it nearly impossible to bind the grain.

Now, in the first place, a great part of these pests might be exterminated by more care in plowing, harrowing, and clearing the land; and, in the second place, by caution in applying any description of manure in which large quantities of undecomposed seeds might remain.

Many weeds may be exterminated quite readily by sending boys into a field, armed with such implements as were mentioned above. If stimulated by an offer of so much per thousand, and their ambition excited, there would be no fear of idling. Few farmers have any idea as to the extent of ground that is occupied by weeds. I remember the case of a ten acre field, in which the wild parsnip became rather abundant. A casual observer would have said that there might perhaps be from 200 to 300 in the whole field. The crowns of the roots were cut off by a straight chisel, and the tops counted. There were actually rather more than 1200 of them. If these could have been all collected, and shown growing in one plantation, no farmer would have questioned the expediency of eradicating the whole; and yet, growing singly about the field, they were larger, and occupied individually more room, than had they been close together.

It is always to be borne in mind that, when weeds are thoroughly rooted out, a comparatively small amount of labor afterwards will keep them down. The farmer whose fields are infested, whose crops are almost smoothered in weeds, looks upon the work of exterminating them as entirely beyond his means; he wishes that they were away, and still cannot quite muster courage enough to attack them But if he commences clearing each field thoroughly, taking care not to stock it again by impure seed or foul manures, he will soon find the labor decreasing. — After the business is accomplished, little more than vigilance is necessary to keep down the first stragglers that appear. A year or two of neglect will soon renew the old difficulties. I have seen large farms in England and Scotland where weeds were scarcely to be found at all, and some few in our own country that also approached to this condition. The amount of labor required to keep such farms clean is not by any means equal to that expended on other farms, in vainly struggling against weeds which have obtained such an ascendency as to threaten the existence of everything else. It is now ten years since the field which I mentioned above was thoroughly cleared of wild parsnips, and to this day they have not reappeared in any number. A single one occasionally shows itself, but is pulled up at once.

On our plowed land the most obnoxious weeds are the Couch grass (Triticum repens,) the Knot grass (Arrhenatherum arenaceum,) and the annual meadow grass. The leek, or wild onion, is excessively troublesome on certain light soils. We have, in short, imported nearly or quite all of the worst foreign weeds, and have reinforced them by various specimens of native growth, such, for instance, as the Canada thistle (Cirsium arvense,) which hold their ground, as natives should, even more obstinately than the foreigners.

Our roads are too often nurseries for weeds, and frustrate all attempts at clearing the adjacent fields. Every farmer who means to be entirely triumphant, must see that this source of supply is cut off. The weeds around the margin of fields, in the angles of fences, and in the sides of ditches, should also be carefully kept down.

There are in many places laws intended to enforce the cutting of weeds by the roadsides, but they are too generally allowed to become a mere dead letter.

Daises can be driven out by enriching meadow land, and even the Canada thistle will yield to an obstinate course of cutting. It must not be left long at a time, but kept cut, so that it may never have an opportunity to gain strength.—*From Prof. Norton's Notes to Stephens' Farmers' Guide.*

Cattle Fairs.—It seems to me that, in this respect, we might learn a good lesson from the English farmer. We have nothing analogous to the numerous county and village fairs which are held at stated periods in all parts of Great Britain. If a farmer here wishes to buy a lot of sheep or cattle for fattening or other purposes, either in the fall or spring, he is obliged, after purchasing what he can advantageously in his own vicinity, to wait for a passing drove from which to make a selection. This may not come at the right time, and may not suit him as to price or quality when it does come; he may, therefore, be either disappointed altogether, or forced to buy what does not exactly please. If he wishes a pair of working cattle, or a horse, he must leave his work, and drive about the country often for days, before finding anything fit for his purpose or within his means. I might go on to mention many other inconveniences connected with the present system, but every practical farmer knows them better than I.

That there is a growing feeling on the subject, is proved by the numerous attempts now making in various parts of the country to connect sales of stock and implements with the county and other fairs. This is an excellent way of making these fairs still more important, and more popular, than they have ever been. If they could be made places to which, at certain times, stock of all kinds will congregate for sale as well as for exhibition, the interest of the masses in them would augment wonderfully. Buyers and drovers with stock would be drawn together from a distance, more or less great, according to the importance of the fair. By one influence or another, the people of a whole county or district would thus be gradually gathered in to take a part in the fair, if not for the sake of improvement, at least as buyers or sellers.—*Prof. Norton.*

Inquiries and Answers.

TO DESTROY ELDERS, &c.

Eds. Gen. Farmer:—Is there any season of the year that cutting, or repeated cuttings, will destroy the willow, white birch, alder, and like shrubbery, that usually infest low, flat land? There are many acres of land that would be easily redeemed to fair pasturage, if this kind of shrubbery could be kept down by some cheap and easy process. Some recommend pulling out by the roots; this is a slow process, and if cutting would do the work, it would be preferable. I recollect, when but a boy, of being sent out to cut such stuff at full moon in August; but since the light of science (great innovator) has stripped "old Luna" of her magic influence over this lower world's affairs, we are left every man to his own way. Any light you may give on the subject will be gratefully received. **John Clarke.**—*Union Mills, N. Y., June*, 1851.

Cut down Elders two or three times during the summer, commencing in July, and grub them up in the fall. What few show themselves next year serve in the same manner, and you will overcome them, obstinate as they are.

THE PEA-BUG—Bruchus Pisi.

Messrs. Editors.—I shall be greatly obliged if you will inform me through the columns of the Farmer, some method of preserving peas from the attacks of the bug or pea weavil. My peas have been destroyed by bugs the two seasons past, and if a preventive could be discovered, I doubt not that it would be very beneficial to many of your readers. **Benj. G. Day.**—*Toledo, May*, 1851.

It may be interesting to our readers not familiar with the subject, to learn something of the habits of the pea-bug.—Early in summer, when the peas are in flower and forming pods, the female beetle deposits an egg in almost every pea. When matured, the pea does not appear injured, but on close examination we can discover in each a minute black speck, which is the *larva*. Dr. Harris says: "The eggs are laid only during the night, or in cloudy weather. Each egg is placed opposite the pea, and the holes through which they pass are so fine as scarcely to be seen, and are soon closed." The larva remains in the pea all winter, gradually consuming its internal substance, and in spring it is transformed into a perfect insect, pierces the skin, and emerges to deposit its eggs in the new pods. The larva has a soft whitish body, and a head small, scaly, and armed with strong and sharp cutting mandibles. The maggot, when it reaches maturity, gnaws a circular hole to the husk or skin of the pea, and even cuts round the inner surface which covers the aperture; so that, when changed to a beetle, by a slight dilation of its body it forces off the lid and emerges the new-born *Bruchus*, as represented in the figure. In many of the peas the insect will be found dead. Whether this arises from a lower temperature than they are accustomed to, not invigorating them sufficiently to leave their habitations, or whether they return to feed when they cannot make their escape readily, which is the case when the peas are confined in sacks, or heaped up in a warehouse, has not been determined.

The vitality of the seed is not usually destroyed; as the egg is deposited in the side of the pea, where the insect when hatched emergies, leaving the germ uninjured. It is doubtful, however, whether the plants raised from such peas are as strong and healthy as those from perfect seed; and they should therefore never be used for seed when it can be avoided.

This insect, though common in all older states, is almost wholly unknown in Canada, owing perhaps to its not being able to withstand the severity of a Canadian winter. Hence thousands of bushels of peas are annually brought from Canada to the United States for seed.

Remedies and Preventives.—Late sowing has often proved a successful preventive against the ravages of the pea-bug. If sown the last of May or first of June, the peas will not blossom or form their pods until after the beetles have disappeared. But peas sown so late often suffer from the drouth, and rarely yield a very abundant crop. It is recommended in *Hovey's Magazine* to subject the peas immediatly after they are gathered to the action of boiling water for *one minute;* by this means the larvæ are destroyed. which are at this time just below the integuments of the pea, without affecting the vitality of the seeds. If the peas remain in the boiling water *four minutes*, most of them will be killed. To kiln-dry the peas at a heat of 130 deg. to 140 deg. will answer the same purpose, and does not destroy the germ. When they are intended for culinary purposes, some such means should be taken to destroy the larvæ, as instances are given by French writers where persons have been *poisoned* from eating worm eaten peas, containing the maggots and beetles of the *Bruchus Pisi.*—w. p. f.

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Messrs. Editors:—What kind of grass is the herewith inclosed? I have seen it before, but do not recollect where. It grew on my farm, which is mainly limestone soil, adjoining a small elevation of the slate formation, which appears to be thrown out of place, as the true slate formation adjoins the limestone formation about one mile further north. The seeds of this grass have been lost by some one, I suppose, who traveled the public highway above it, and washed down with some of this slate formation. It grows on this comparatively poor place very luxuriantly, and the cows have a relish for it. If it is worth cultivating, I would like to save the seed and propagate it. **D. Kohler.**—*Monterey, Pa.*

The specimen of grass sent us with the above is *Holcus lanatus*, or Woolly Soft Grass, common in our country, but not abundant, and is considered a poor grass here and in England. Sinclair speaks of it as not sought for by cattle, but left to stand while others are cropped to the roots. Its hay is soft, and being covered with down, it is refused by horses. Salting would improve it. The grass would be more valuable in early spring if it came forward. It is easily cultivated on moist soils, and is a handsome grass. Even beauty can not sustain it.

* * *

Eds. Gen. Farmer:—I wish to get some information in regard to plastering corn. Which is the best method—to plaster each hill separately, or sow it broadcast upon the whole piece? **P. Miller.**

Plaster in the hill is the most economical.

The Ash of Wheat.—The twenty-fifth number of the Journal of the Royal Agricultural Society contains a trustworthy analysis of the ash of winter wheat, in which soda took the place of potash to a larger extent than we have elsewhere seen. The fact is of importance as soda is a cheaper fertilizer than potash. The composition was as follows; sulphuric acid 0.160; phosphoric acid 48.719; potash 20.019; soda 14.965; chloride of sodium (common salt) 1.667; lime 1.360; magnesia 12.919: silicic acid 0.191. Total 100 parts. If the reader will add the phosphoric acid, potash and soda together, he will see that they constitute 83.703 parts in 100 of the ash of wheat. Lime forms less than 1½ per cent, while magnesia is present to the amount of nearly 13 per cent. 100 lbs. of this wheat contained a little less than 2½ lbs. of ash when thoroughly burnt (2.298 in 100.) Per centage of nitrogen in dried grain 2.611. These figures show that 95 parts in 100 of wheat are clear coal (carbon) and the elements of water.

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John Abernethy, the eminent surgeon, used to tell his scholars that all human maladies arose from two causes—stuffing and fretting.

A SUMMARY OF THE METEOROLOGICAL OBSERVATIONS MADE AT ROCHESTER, 1850.

BY L. WETHEREL.

It will be remembered by the reader, that the spring of 1850 was very cold and backward—more so than any one for about twenty years, as far back as any register of the weather made here could be traced. The average mean temperature of the year, from 1095 observations, is shown to be 47.13 degrees. The temperature of the spring months, 40.05 deg.; summer months, 69.75 deg.; fall months, 50.76 deg.; winter months, 27.60 deg.

The warmest day in the year, July 17th—the average temperature of the day, from three observations, 83 deg. The coldest day, Feb. 4—9 deg. The mercury on June 19th, rose to 94 deg. the highest during the year. The lowest was 4 deg. above zero, on February 4th—making the greatest annual range 90 deg.

The mean height of barometric column, 29.44 inches. The same for the last ten years, 29.55 inches. The mercury in the barometric tube was the highest Feb. 6, at 7, A. M., when it stood, 30.17 inches—the lowest, May 17th, at 7 A. M., 28.83 inches — showing the greatest annual range to be 1.34 inches.

The amount of rain and melted snow was 38.468 inches, distributed as follows : January, 3.033 in.; February, 1.948 in.; March, 1.679 in.; April, 2.560 in.; May, 2.867 in.; June, 1.837 in.; July, 5.969 in.; August, 1.929 in.; September, 2.951 in.; October, 5.058 in.; November, 3.355 in.; and December, 5.282 in.

Direction of the wind—north, 19½ days ; northeast, 43½ days ; east, 14½ days ; southeast, 19½ days ; south, 21½ days ; southwest, 69½ days ; west, 71 days ; and northwest, 96. The prevailing wind, northwest.

The number of fair days, 158½ ; the number of cloudy, 206½ ; the number on which rain fell, 119 ; snow, 69 ; rain and snow, 11 ; whole number on which rain and snow fell, 199.

The first frost, September 15 ; first fall of snow, October 23.

The season was one of extraordinary productiveness. The cold weather terminated about the 4th of June, after which the summer was very warm until about the 20th of August, when there were a few very cool days—frost was seen in various lowlands in Massachusetts. After these few cool days, the weather became warm again, and continued so until vegetation had come to the perfection of maturity. Thus the latter harvest, like the former, was bountiful, notwithstanding the prospects were so forbidding on the first day of June. He that refused to plow and sow because of the cold, shared not the plentiful harvest of the diligent and trusting husbandman.

* * *

Goober Pea, or Pea-nut. — Where the climate and soil suit, this is a valuable crop. The nuts are capital for hogs and the haulm makes excellent hay. In some parts of Tennessee, Georgia and Alabama it is an agricultural staple, and extensively grown for export. The yield is from 25 to 50 bushels per acre ; on good land 40 being about the average. They are quoted in Nashville at from 75 to 100 cents a bushel. They have been grown in Genesee county, Western New York, but flourish best where it is warm enough to bring sweet potatoes to perfection. A correspondent writing from Hickman county, Tennessee says ; "The ground is well prepared by plowing and pulverizing, and the peas are planted in ridges or hills and cultivated like other hoed crops. The peas are produced in the ground, the tops running over the same. About the last of September or first of October, they are ripe and ready for harvesting. This is done by first carefully cutting off the tops which are cured for hay. A plow then runs 'round a row of peas turning a furrow away from it, and then they can be lifted by hand, and after shaking the dirt off, are left to dry in the sun on the vines. If the ground is wet, they should be picked and taken to some dry place to cure."

In Georgia, it is common to let hogs gather a good share of the crop, as they do peas and oats in some of the western states. Where ground peas are a market crop, the gathering and curing are the principal expense. A light, sandy *loam is most favorable to their production.*

* * *

MATERIAL FOR FENCING.

Fencing is such an expensive item in the farm account, that farmers are beginning to bestir themselves to find some cheaper mode of fencing than that in general use. The live, or hedge fence, and the wire fence, are the modes generally recommended, and each system has its friends and advocates, who are trying experiments — and time and practice, the great tests of theories, will ere long make known the better way. We have on our table many communications, asking for information, and giving the plans of their several authors, and the results of their experiments. The following is from *Benton, N. Y:*

Messrs. Editors :—Having been a reader of the Farmer for a few years, I have been both pleased and instructed. In an especial manner I have a deep interest in what has been said about live fences. The time is not far distant when fencing materials will be in great demand, and some are beginning to feel it already. Although my father's farm has plenty of rail timber for the present, he has thought fit to commence raising hedges, so that when he needs them he will have them. The object of writing this is to find out which is the best material. We have some of the English Hawthorn growing, but it is affected by a kind of white lice, something like those which are generally found on beech trees : whether they will injure them or not we do not know. Some recommend Honey Locust very highly.

I would like to know your opinion concerning Buckthorn —whether it will make a durable fence and a good one, and when best to be planted for a fence — in the fall or spring? and where can the seed be obtained? Also, I should like to know whether the Osage Orange will answer for fencing in this climate. I would like to know, Messrs. Editors, which you would prefer if you were going to plant fences for yourselves. Where can the materials for propagating be obtained and at what price, and the best way of propagating? If you will answer these inquiries through the Farmer, you will oblige D. S. Crozier.—*Benton, N. Y.*

The Hawthorn cannot be relied on for fencing. — The best we have seen in this country is in the vicinity of Geneva, in this state, but they are not equal to the English Hawthorn hedges. The native thorn would be much better. The Honey Locust will make a good a and very strong hedge. The Buckthorn also makes an excellent hedge. We cannot say at the present time that the Osage Orange will prove entirely hardy, though we have seen the plants winter in this section without the least apparent injury. It is said that this plant proves entirely hardy in the neighborhood of Boston. Our correspondent will find all the information he needs in regard to the

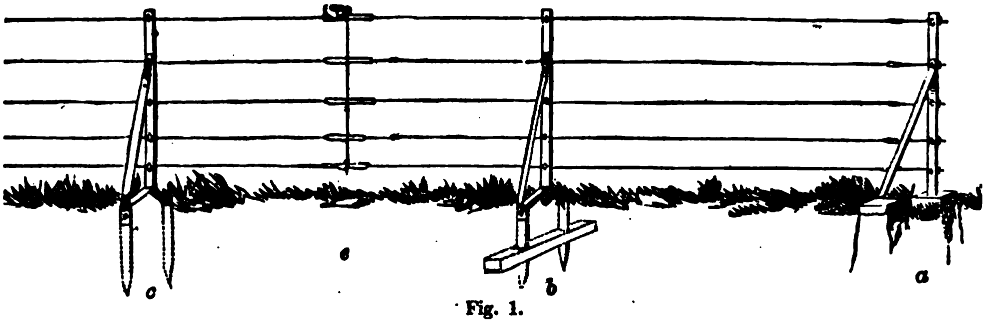


Fig. 1.

propagation of plants, and making the hedge, in the March number of the Farmer, for 1849.

Messrs. Editors :—I intend to emigrate to the "natural gardens" of Illinois, this fall, where fencing materials are scarce, I write you, hoping some of your subscribers who have have had some experience in making wire fence, and who have tested its value, will inform me through your valuable paper, or otherwise, the best mode of making, and the comparative value of, wire fence. I think of using No. 11 wire; posts of common size, firmly set, ten rods apart; making the fence four strands high. I shall place the first wire two feet from the ground; the second, six inches from that; the next, eight inches; then ten inches—making a fence four feet high. After the wires are properly stretched, I shall drive from ten to fifteen stakes between the posts, to which I shall fasten the wires by means of staples or hooks made of the same wire. Under the wires I intend to make a "*stone wall*" of sods and dirt.

In the volume of the Genesee Farmer for 1849, are several articles on wire fence, from Myron Adams of East Bloomfield, T. C. Peters of Darien, and D. Kingman of Ridgeway. What has become of their fences? Does the wire fence meet their expectation? Will a fence made after the above style answer the purpose? Any information on the subject, from them or others, will be thankfully received by H. G. Skinner.—*Prattsburgh, N. Y., June*, 1851.

We believe most of the wire fence constructed in this section, and to some of which our correspondent refers, was put up in too cheap and fragile a manner. Wire fence may be the cheapest fence it is possible to make in some places, and yet it can not be made in a durable manner as cheap as it was at first supposed. Wire fence with a post every ten rods, can not be substantial, and unless the intermediate stakes are almost as substantial as posts, we fear our correspondent's fence will fail. The best we have seen has a good post every twelve feet, and a board at the base. Another, constructed in the same manner, has a board both at top and bottom, the one at the top being quite narrow. This is as durable and as pretty a farm fence as one would wish, though we can not vouch for its cheapness. In another page will be found an advertisement of J. B. Wickersham, of New York, who is manufacturing wire fence of different patterns, for farms, gardens, cemetries, &c. The specimen in the engraving costs $1 per rod, one-quarter inch wire, with bolts, &c., complete, with the exception of the posts; and it would probably be more economical for most farmers to use wooden posts.

Fig. 1, *a*, the straining pillar, or starting post, necessary for the extreme ends of the fence, for the purpose of making the wires tight—made of iron or wood; commencing from a tree is recommended, as it is absolutely necessary to have firm posts at these points. *b*, the manner of inserting the prongs or feet of the post in wood, for permanent fence. *c*, the manner of inserting the prongs or feet into the ground, for moveable fence. *e*, intermediate screws to tighten the wires, necessary every 300 feet; with a rod passing through the center of each, locked at the top to prevent persons loosening the wires.

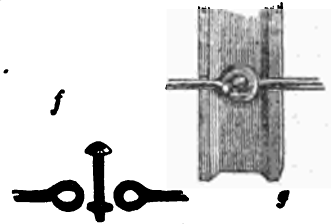
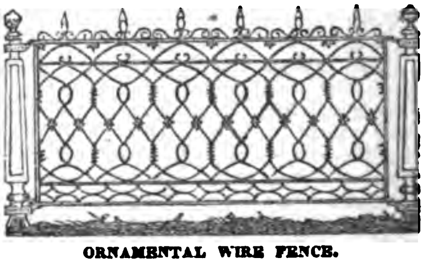


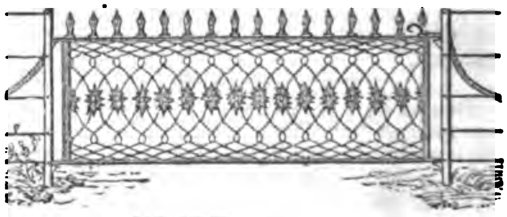
Fig. 2.

Fig 2, *g*, sectional part of the posts, showing the manner of securing the wire in the posts, the bolt passing through the eyes of the rods. *f*, the bolt and eye on the ends of each rod. Length of rods, 12 feet—making the distance between each post 12 feet.

L. G. Morris, of Mt. Fordham, N. Y., has had a quantity of this fence put up on his farm, and we should be pleased to have his opinion of its advantages over other fences. We intended to visit the farm of Mr. Morris, when in New York a few weeks since, but could not make it convenient to do so. We however saw specimens of the finer kinds of this fence in Greenwood Cemetery, and they were the most beautiful on the grounds.



ORNAMENTAL WIRE FENCE.



ORNAMENTAL WIRE GATE.

The above is one of the patterns of the ornamental fence, and also a gate, wove in iron wire, and they are very neat for village garden fences, making a very beautiful appearance at a moderate cost.

IMPROVED HAY-FORK.

Messrs. Editors:—As it is now about haying time, I would bring to the notice of your readers a new and simple contrivance for pitching hay by horse-power. We all know that unloading hay and stowing it away in the mow is *warm work* some days in July, and any labor-saving device which is not expensive, will, I think, prove as useful to farmers as the horse-rake which is now coming into general use. The annexed figures will illustrate this contrivance, so that any farmer can put one up in his barn. The design was shown to me by an ingenious farmer, while in the Patent Office last year, but not being patented, it is of course public property. It consists of three pulleys, about 80 feet of ¾ inch rope, and a large fork. Fig. 1 is the fork, the head of which is about 28 inches long and 2½ inches square, made of good hard wood. The handle is 5½ feet long, morticed into the head, and secured from splitting by a strap of iron clasped round the head and extending some distance up the handle. The prongs are made of steel, 20 inches long, ⅝ inch thick at the head, and tapering to a point. They may be set in the head at equal distances apart, with a burr attached to screw them up tight. Two ropes, or rods of iron, (*a*, *a*,) 3 feet long, fastened to the ends of the head, are brought together at *b*, to which a pully is attached. A small rope, *c*, is fastened to the end of the handle, in length to suit the height of the barn, by which the fork is kept level as it is raised to the top of the mow, where the hay is discharged by slackening the rope. In adjusting the machine, let one end of the main rope be attached to the peak of the rafter, about three feet over the bay, as at *a*, fig. 2, which represents a section of the barn, thence let it pass through the pulley *b* on the fork, then through the second pulley *c*, then through the third pulley *d*, fixed to the lower part of the door post, to give a level draft for the horse. One man on the load, another in the mow, and a boy to lead the horse, constitute the force necessary to unload hay in this manner; it is done very rapidly, and the machine, though a simple one, will be found to save much hard labor.

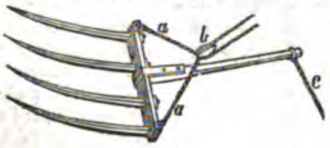


Fig. 1.

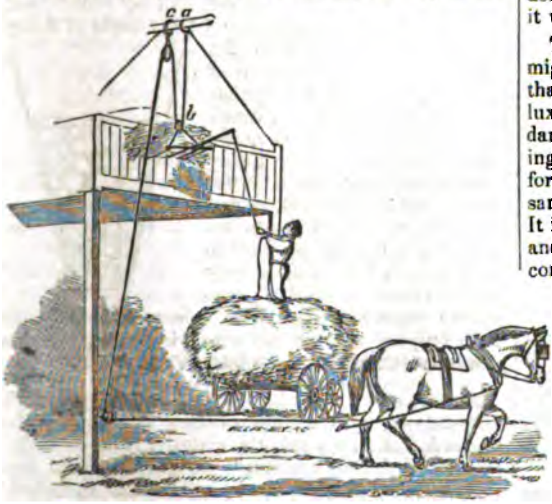


Fig. 2.

W. P. F.

CULTURE OF WHEAT IN WESTERN NEW YORK.

It is universally admitted that Western New York is the best wheat growing district in the world, both from the superior quality and quantity of the wheat. Any practical farmer would immediately pronounce it first rate wheat soil, from its texture and appearance—and these have more to do with it than most scientific writers imagine. A ride, at this time of year, through the Genesee Valley, on either side of the river, would equally delight and reward an enlightened agriculturist. The scenery is delightful—more beautiful than anything I have before seen. The neat houses, with well cultivated gardens of fruit and flowers, good, substantially built barns, and board, or good worm fences, are sure indications of independence, intellect and plenty.

Many farmers informed me that their table-lands have been gradually improving for years, owing to good tillage and the growth and plowing in of clover. The most peculiar feature in this *wheat* growing district, is the exceeding luxuriance of the clover and the comparative poverty of the wheat crop, though, I am told, it is as good as other years, and will, perhaps, average twenty bushels per acre—a small crop for such land and such a climate. I know a soil, certainly no better than this, that has grown a crop of wheat every year of 15, 18, and sometimes 20 bushels per acre, for ten successive years, and the whole crop been removed and no manure supplied. This same soil, by supplying ammonia, phosphoric acid, and alkalies, yields 40 bushels every year, but it would not pay thus artificially to supply them.

Though twenty bushels in Western New York might be considered remunerative, it appears to me that thirty might be grown, and be more so. The luxuriance of the clover indicates that there is abundant inorganic matter in the soil, for crops now growing there would contain sufficient ash constituents for thirty bushels of wheat and straw; yet on this same soil, eighteen bushels is considered a good crop. It is plain, then, that the deficient element is organic, and it has been clearly proved by a series of carefully conducted scientific experiments, by Mr. Lawes, that nitrogen is the one, and if that is supplied, the other three, oxygen, hydrogen, and carbon, will be obtained from the atmosphere. The object, then, of the farmer, is to obtain this nitrogen from the atmosphere, and get the minerals in the soil in a fit state for assimilation. The former he can best do by growing clover and other liguminous plants; the latter, by good tillage and under-draining.

In the May number, is given the analysis of a soil from Lockport, by Dr. Salisbury, of Albany, from which it appears that beside other substances I have not calculated, this soil contains in one acre, six inches deep,

Lime,	1.212
Potash,	1.851
Soda,	740
Phosphoric Acid,	109

The phosphoric acid would be soonest exhausted. A crop of wheat of twenty-five bushels to the acre, and equal weight of straw, would contain about twen ty pounds, so that five such crops would nearly exhaust it. The potash would last for a hundred crops; the lime about the same; but the straw is not usually sold off the farm, and as it contains much the most lime, and an equal amount of potash, these substances would not be exhausted by the removal of two hundred crops of wheat of twenty-five bushels per acre. The intermediate crops, as they are, or ought to be, consumed on the farm, drain the soil of very little except nitrogen and phosphoric acid; the latter forming the base of bones, is largely exported from the farm by the rearing of cattle and sheep. Thus it will be seen that the soil is very likely to be exhausted of bone earth, and that the recent discoveries of this mineral on Lake Champlain and in New Jersey, will be of great benefit, though at present little value will be derived from its application owing to the want of nitrogen in the soil.

A crop of clover equal to one ton of hay, would contain forty pounds of nitrogen, and as it requires five pounds of nitrogen to produce a bushel of wheat, such a crop plowed in would give an increase of eight bushels over the *normal produce of the soil*, to say nothing of the clover roots, which would probably be equal to half the crop of clover, and thus making on the whole an increase of twelve bushels, through growing clover. But as in plowing in clover no phosphates or alkalies are supplied, but what are obtained from the soil, and the crop materially increased, thereby consuming and exporting more of these substances, the soil will so much the sooner be exhausted of them; or, if not exhausted, in the strict sense of the term, the proportion which they should leave in a good soil will be so much reduced that the crop will be defective, though there might still be a sufficient quantity for a crop in the soil.

In the October number I attempted to show how the nitrogen collected by growing clover might be profitably increased, and potash, phosphoric acid, and other valuable ash constituents, be supplied by feeding sheep, or cattle, with clover, hay, and oil cake, and, after a reconsideration of the matter, and an examination of everything known on the subject, I am still of opinion that something of that kind will be found the best way of increasing the crops and profits of the farm.

With "Anti-Humbug," (who every one who reads carefully and intelligently, will perceive has mistaken my reasoning,) I think the wheat crop of Western New York would be diminished one-half by discontinuing the *growth* and plowing in of clover, and, therefore, would advise that much more clover, peas, and roots, should be grown, and either consumed by sheep and the manure carefully returned, or *plowed in*—the latter giving the quickest return for labor, but the other the greatest profit ultimately. **Joseph Harris.**—*Rochester, N. Y., June*, 1851.

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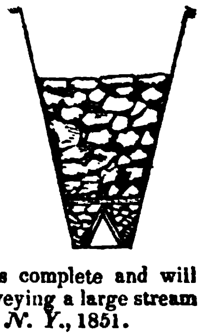
Comparative Value of Dung Heaps.—The dung heap will, under the careless system, more rapidly diminish in bulk than in value, so that a load of it unrotted is not worth much more than half a load of the well-rotted manure; while the whole bulk of the heap after rotting in this way, may be worth, perhaps, two-thirds or three-fourths of the whole bulk in its original state. When carefully prepared, the whole heap is worth as much as in its original state, indeed, more, the labor spent upon it not being lost; and as the bulk of the heap does diminish somewhat, the value of a given bulk increases in the same proportion.

DRAINING.

Messrs. Editors:—Enough has been said and written upon this subject, to convince the most skeptical of its vital importance and practical utility; yet, in this vicinity, comparatively little attention has been paid it. This is not by any means owing to the lack of its necessity, on the contrary there is scarcely an acre of land in the neighborhood that would not be vastly benefitted by the operation, and a very large proportion of it would thereby be converted from almost uselessness to great fertility. We now see most of the plowed fields (I will not say cultivated, for that implies something more than the fact of its having been scratched over for a series of years,) interspersed with patches of grass, too wet to admit of plowing—swales, spring-holes, &c. The effect of capillary attraction is such that the crops raised in the vicinity of these places, are always very inferior. Their unsightly appearance, and the inconvenience of plowing around them, should furnish sufficient inducements to try the benefits of draining. My object is not to furnish new arguments in favor of this operation. Its undeniable utility has already been settled by many able papers in the columns of your invaluable periodical. It is merely to contribute the results of some eight years experience and observation in the making and filling of drains. Some of my neighbors have failed in securing permanent advantages to their lands, through the slovenly manner in which they have proceeded, viz: the want of depth, and proper care in filling up—such ditches becoming obstructed in a short time. I am in favor of deep drains—not less than three feet—as narrow as they can be conveniently dug; the bottom should be but little wider than the shovel—the narrower the less earth to be excavated, reducing the expense by facilitating the work. The culvert can be constructed with more ease and permanency; my mode of doing which is as follows: With flat stones set against the edges of the drain, and brought together in the center, roof-like: break joints with flat stones, and wedge firmly at the sides—then nicely level off and sheet over with flat stones; fill in with such as you have left, to within fifteen inches of the top, taking care to leave the top level and closely packed, to exclude the dirt; cover with plow, and your drain is complete and will never fail, and is capable of conveying a large stream of water. C. W. T.—*Enfield, N. Y.*, 1851.



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Renovating old Trees.—The London Gardener's Chronicle contains an interestering account of the renovation of an old oak, the material facts of which we will condense in a single paragraph. The tree was 20 feet in circumference, hollow, and the abode of a famous swarm of bees, where honey was coveted by some chaps who had no legal right to the same. They set the dead wood in the hollow on fire, to smoke out the bees and get their generous store of sweet; but justly fearing the combustion of the whole tree, and punishment, with great efforts and the aid of a fire engine from the village of Buckinghamshire, they finally succeeded in putting out the fire. By the assistance of the *ashes* furnished from the dead wood within the tree, it has been rejuvenated, bears abundant crops of acorns, and may live another century.

Horticultural Department.

EDITED BY P. BARRY.

THE SUMMER MANAGEMENT OF FRUIT TREES.

Wherever we see trees beautiful in form, and in a condition of early fruitfulness, we may be assured that the person who conducts them is not wholly ignorant of the means by which growth and fruitfulness are regulated. We have never met with a French gardener who had any practice in tree growing, who could not deliver a very interesting lecture on the whys and wherefores of the various operations he had been accustomed to perform in the propagation and training of trees; and it is this theoretical or philosophical knowledge that gives to French gardening its acknowledged superiority. Everywhere, in their gardens and in the essays we find in their periodicals, we see evidences of the fact that tree-culture, there has been taught, philosophically and practically, by such men as Thouin, D'Albret, Dubriral, Hardy, Cappe, and others who not only stand high as vegetable phisiologists, but as practical arboriculturists.

Gardeners trained under these men, in the various public gardens of the nation, are scattered over the country, giving beautiful practical illustrations of the training they have received. Those who have been fortunate enough to enjoy a ramble through French gardens, know this very well. English gardeners are rather unwilling to admit that they are behind in this, but they are, and they may just as well acknowledge it; and we can tell them another department in which Frenchmen are in advance, and for the same reason—that the subject is considered by them more philosophically. We refer now to the *packing of trees for long journeys.* Nurserymen in this country, who have imported from both countries, know something of this. We rarely suffer from loss in our French importations, but we rarely fail to suffer from our English, although the passages from England are generally much shorter than from France. When the two packages are opened side by side—we mean the French and English—the difference of the two systems is at once observable, and any one, however unskilled in such matters, would at once decide that the Frenchman was more thoroughly acquainted with the conditions of vegetable life, and the means of preserving it, under certain circumstances. A few English nurserymen who have become acquainted with the French modes of packing, have learnt to send us out articles pretty safe, but the greater number of them cannot be persuaded to abandon their old routine, although they are told over and over again that it is ruinous to their trade and their customers.

These are matters, however, that we did not intend to touch upon now, but they occurred to us as illustrative of the importance to all men who desire to manage trees successfully in any way, whether in a growing or dormant state, of understanding their nature.

The summer management of trees is everywhere badly understood, and it is really the most important branch of the art and science of tree culture. Trees are very generally left to themselves, as regards pruning, during the summer, and when the winter or spring pruning comes, immense quantities of surplus wood has to be cut away, and this cutting promotes a continued growth of wood and retards the production of fruit. Without a judicious summer pruning, we must say we would greatly prefer to have trees left *entirely to themselves* during the whole season. It would not only be a great saving of labor, but more favorable to the health, longevity, fruitfulness and beauty of the tree. In 1848, when we visited the Chiswick gardens, where we expected to find the master-pieces of English fruit tree culture, we saw trees framed and trained into various forms, but in nearly every case they were masses of young shoots of the previous season's growth, and the pruning that we then saw going on, was nothing but an indiscriminate shearing or shortening of this superfluous and unfruitful growth. When we crossed the channel and looked into the "Jardin des Plants," which is the "Chiswick" of Paris, or rather France, we found trees there in a very different condition. In all the forms in which they were conducted, we found them covered with fruit buds and fruit branches. Every shoot of the previous season's growth, not really required to make up the *form* of the tree, was pruned or pinched during the growing season, so that they were converted into fruitfulness instead of having to be cut away at the winter pruning to make room for another crop of barren shoots to be in their turn cut away. The Frenchman's winter pruning is *almost* a mechanical matter, a shortening of each shoot, in proportion to its position and strength, with a view to produce the form aimed at; and this is all it ought to be. The present is a good time to call attention to this matter, and for the sake of making ourselves understood, we subjoin the figure of a side branch of a pear tree (Fig. 1,) which was shortened at the winter or spring pruning, so that every eye left produced a shoot.—We see that below the leader two shoots, *a*, *a*, are produced. Now instead of allowing these two shoots to acquire their natural development, as they are not needed in the frame work of the tree, we pinch off the growing points at three or four buds from their base, say at the cross lines, *b*, *b*. This stopping concentrates the sap in these shoots and changes them into fruit branches. The pinching may be performed at any time when the shoots have acquired sufficient length, but when pinched early, say in the latter end of May, or in June, the buds frequently break and grow strongly again; in such a case the *pinching* must be repeated when they have grown three or four inches, or made two or three joints of new wood, or if they are allowed to grow until the beginning of August and the ends of the shoots then broken, as at

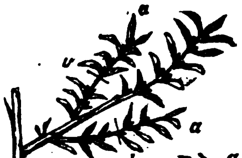


Fig. 1.

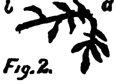


Fig. 2.

a, Fig. 2, and left to hang for a week or so, the effect will be more complete, for the sap is not so suddenly checked as when removed at once, and therefore the remaining buds are not so likely to push again into wood. At the end of a week or so, these broken points can be cleanly removed with a knife.

Another case requiring summer pruning or pinching, is to maintain a due relative degreee of vigor among the different parts of the tree. It very often occurs that one branch will acquire so much more vigor than others, as to destroy the balance of the tree if left to itself all summer. All such cases should receive attention as soon as the difficulty becomes obvious. A simple pinching of a strong shoot overgrowing and robbing its neighbor, reduces its vigor and allows the others to come up.

Another case still where pinching is of importance, is to check, or remove entirely, shoots that are either misplaced, awkward, or superfluous. By rubbing or pinching them off while soft, they are completely got rid of; but if allowed to remain till the end of the season and then pruned off, a portion of the sap and force of the tree has been uselessly expended and the foundation laid for future crops of similar productions.

Besides these points, which we call the summer pruning, there are others that should not be overlooked. Where a branch takes a wrong direction, either too much to one side, too pendulous, or too erect, it should be brought to its proper place and kept there by means of ties or props. Persons who will give attention to these details, will soon acquire the necessary skill and experience, and be able to mould their trees into any desirable form, and at the same time hasten and insure their fruitfulness.

FRUIT CULTURE IN CONNECTICUT.

There are three difficulties in the way of raising fruit in the western portions of this State—the Climate, Storms, and the Soil.

1st, *The Climate.*—When the country was new, peaches, plums, &c., would grow in abundance, almost without care or cultivation. Now they are raised only in some favored spots, and not even there without great care. They thrive tolerably well for a few years, and then die without apparent cause. The last winter was not severe, and yet I counted, yesterday, six or eight peach trees in one garden, that had but just attained the size for full bearing, all apparently dead.

2d, *Storms.*—These are often very severe, being accompanied by high winds. In winter they are called "Ice Storms," *i. e.*, storms that commence with snow or sleet, and end with rain; which, freezing on everything as it falls, loads the trees, &c. with ice so heavily as often to cause the partial, or entire, destruction of many trees, and sometimes of nearly whole orchards. Several years may sometimes pass without serious damage from these storms, but generally, more or less injury is done every winter. Ornamental and forest trees also suffer much, being rendered unsightly by the loss of many of their branches. Similar storms occur in summer, except the freezing, accompanied by winds so violent as to blow, or rather *beat*, off young fruit, leaves, branches, &c.

3d, *The Soil.*—Though much of the country is hilly, and even mountainous, yet the soil is often so wet and marshy, even on the uplands, as to be unfavorable to the growth of the apple, and much of it wholly unfit, in its natural state, for the cultivation of the peach, pear, plum, &c. This difficulty might be greatly lessened, and in most places entirely removed, by a judicious system of draining. But such are the stereotyped notions of the people generally, (there are some exceptions,) that few, comparatively, are willing to believe, or to act, on the subject, and those who do, seem often unwilling to be advised, and conduct their draining operations very injudiciously, and, of course, unprofitably. Hence, farming and gardening operations are frequently very much retarded; so that fields and gardens that might be in a condition for the plow, or the spade, early in May, are now often undisturbed until the beginning of June. H.—*Down East, May,* 1851.

NOTES ON SPRING FLOWERING SHRUBS AND PLANTS.

The Double Flowering Crimson Currant—(Ribes Sanguinea flore pleno.)—Among the early flowering shrubs, we have this season been particularly well pleased with this new flowering Currant. We had many young plants bloom in great perfection, both in the houses and in the open ground. It forces well; indeed, a specimen in a pot, when in full bloom, we considered as elegant as anything we have had in our whole collection. The foliage and habit of the plant differs but little from other currants, but the flowers are produced in long bunches like the old Single Crimson—have the same brilliant color, with the addition of being quite double. It is really an acquisition, and we can cordially recommend it for small, choice collections. It flourishes, like all its family, in any common garden soil, and is readily propagated by *layers* or cuttings. We believe it originated in France and was there first introduced to culture in 1845, and has now become widely disseminated.

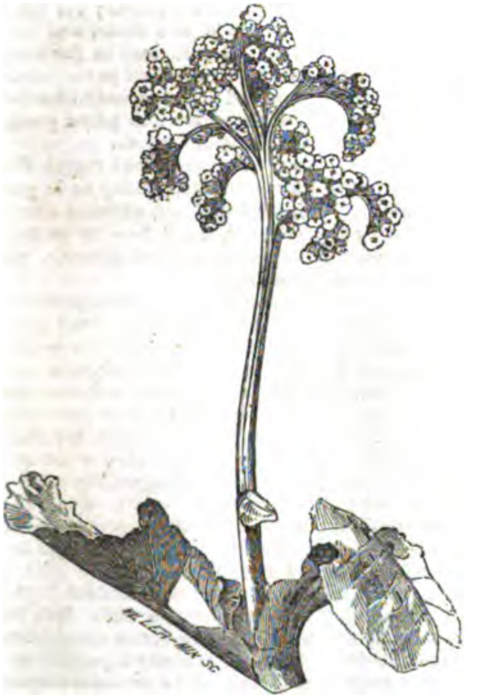
DOUBLE FLOWERING CRIMSON CURRANT.

Gordon's Hybrid Currant—(Ribes Gordonianum.)—This we mentioned last season, being the first we had it in bloom. We allude to it now to say that it proves a hardy and really beautiful thing. It is of robust growth, like the old yellow flowering, and the flowers are crimson and yellow—very showy. A large, well grown plant in full bloom, is a rich and beautiful object. It is easily grown and propagated, like all other currants, by cuttings and layers.

Ribes Malvaceum.—This is described as being rose colored, but the flowers, so far with us, have but little color and is much less ornamental than we were led to believe it would be. It is a Californian species, and it may be that our plant is not genuine, though it answers the description in all particulars, save the color of the flower.

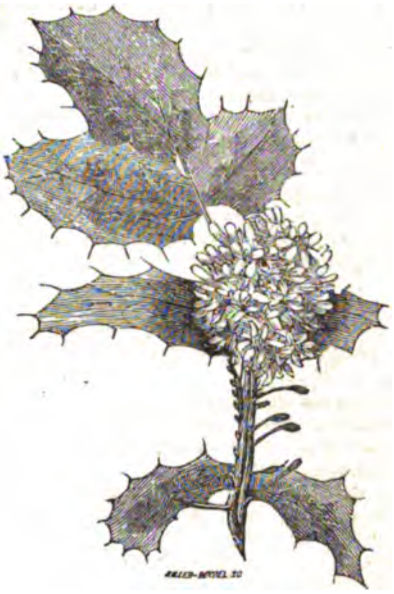
Ribes Albidum.—This is a white flowered variety, and originated, we believe, in Scotland a few years ago. Our plants have not yet flowered. We take much interest in the ornamental species and varieties of the Currant, and look to them as destined in the future to produce many excellent things.

Double Flowering Plum-Leaved Spiræa—(Spiræa prunifolia flore pleno.)—This was noticedi n our volume for 1848, page 123, at the time of its introduction to this country. It proves a beautiful and perfectly hardy shrub. It forms a fine, compact bush, and now, early in May, it is covered with its small, pure white, daisy-like blossoms. We speak of it now because we are able to judge of the effects it may produce, and its merits generally, from having large and well grown specimens. It is one of the earliest of all the Spiræs in bloom.



SIBERIAN THICK-LEAVED SAXIFRAGE.

EARLY FLOWERING PERENNIAL HERBACEOUS PLANTS.—Among showy border plants of this kind, we have been particularly well pleased with the Siberian thick leaved Saxifrage *(Saxifraga Crassifolia.)* The leaves remain green all winter, are almost as large as a cabbage leaf, quite thick and close to the ground. The flower stem is from six to twelve inches high, bearing on its top an immense cluster of pretty lilac flowers about as large as those of a hyacinth and of similar shape. When the plants have become well established, so that a number of stems are produced together, it produces a fine effect. It is propagated by division of the plants, succeeds well in any good soil, and blossoms from the first to the last of May.



HOLLY-LEAVED BERBERRY.

The Mahonia Aquifolia—(Holly-Leaved Berberry.)—This proves with us a fine, hardy, evergreen shrub. Its habit is spreading, attains the height of three or four feet. The foliage is dark green, glossy and prickly like the Holly. The flowers are produced in large heads or clusters, and are a beautiful clear yellow color. They begin to open early in April, and continue through all of May. A single plant, or a mass of them, on a lawn produces a fine effect. The color contrasts well with the brilliant scarlet of the *Pyrus Japonica*, (Japan Quince,) in bloom at the same time. It succeeds well with us in any soil and situation, but if possible it should be in a somewhat shaded place, where the sun will not reach it in winter with much force. It is so low, however, that it keeps pretty well in the shade. It is easily propagated from seeds and by division of the plant, as it throws up radical shoots freely.

The *Fasicularis*, *Repens*, and *Intermedia*, are species with some slight botanical distinctions, but they possess the same general appearance in foliage and flowers. They are all beautiful and merit a place among small collections of shrubs.

* * *

LATE TRANSPLANTING.—Dig a trench carefully round the tree, so as to leave a good ball of earth, not inconvenient to manage, about the principal part of the roots. The trench should be as narrow as your spade will permit you to make it. Fill the trench with water, and let it stand for 12 hours. Then fasten a piece of coarse cloth or matting about the ball—for it will adhere in a mass—lift it out of the hole, and transplant it, tree and all.—*Horticulturist.*

Ladies' Department.

"RURAL HOURS."

A BOOK has recently been published, entitled *"Rural Hours,"* by Miss COOPER, of Otsego county, N. Y., daughter of J. FENNIMORE COOPER, the novelist. It contains pleasing pictures of rural life. Miss COOPER is a close observer of nature — she sees beauty in the flower, majesty in the forest tree, music in the rippling waters, the sighing breezes, and poetry everywhere. We give a few pages from the work, and we hope the remarks on the pilfering of fruits and flowers will at least have an effect on those who have hitherto acted thus from thoughtlessness. If you must pilfer, cut the buttons from our Sunday coat, or take the money from our pockets, but touch not our fruits and flowers.

"One always loves a garden; labor wears its pleasantest aspect there. From the first days of spring, to latest autumn, we move about among growing plants, gay flowers, and cheerful fruits; and there is some pretty change to note by the light of every sun. Even the narrowest cottage patch looks pleasantly to those who come and go along the highway; it is well to stop now and then when walking, and look over the paling of such little gardens, and note what is going on there.

"Potatoes, cabbages, and onions, are grown here by every family as first requisites. Indian corn and cucumbers are also thought indispensable, for Americans of all classes eat as much maize as their Indian predecessors. And as for cucumbers, they are required at every meal of which a thorough-going Yankee partakes, either as salad in summer, or pickled in winter. There is usually a pumpkin-vine running about the corn hills, its large yellow flowers and golden fruit showing, as a matter of course, below the glossy leaves of the maize; a part of the fruit is made into pies, the rest goes to the cow or pig. Sometimes you find squashes, also, in these small gardens, with a few tomatoes, perhaps; but these last are difficult to raise here, on account of the occasional frosts of May.

"Flowers are seldom forgotten in the cottage garden; the widest walk is lined with them, and there are others beneath the low windows of the house. You have rose-bushes, sun-flowers, and holly-hocks, as a matter of course; generally a cluster of pinks, bachelor's buttons, also, and a sweet pea, which is a great favorite; plenty of marigolds, a few poppies, large purple china asters, and a tuft of the lilac phlox. Such are the blossoms to be seen before most doors; and each is pretty in its own time and place; one has a long-standing regard for them all, including the homely sun-flower, which we should be sorry to miss from its old haunts. Then the scarlet flowering bean, so intimately connected with childish recollections of the hero Jack and his wonderful adventure, may still be seen flourishing in the cottage garden, and it would seem to have fallen from a pod of the identical plant celebrated in nursery rhyme, for it has a great inclination for climbing, which is generally encouraged by training it over a window. We do not hear, however, of any in these parts reaching the roof in a single night's growth. You must go to the new lands on the prairies for such marvels now-a-days. They tell a wonderful story of a cucumber vine somewhere beyond the great lakes, in the last "new settlement," probably; the seed having been sowed one evening in a good bit of soil, the farmer, going to his work next morning, found it not only out of the ground, but grown so much that he was curious to measure it; 'he followed it to the end of his garden, over a fence, along an Indian trail, through an oak opening, and then seeing it stretch some distance beyond, he went back for his horse, but while he was saddling old Bald, the vine had so much the advantage of him that it reached the next clearing before he did; there he left it to go back to dinner, and how much farther it ran that day Ebenezer could not tell for certain.'

"We have no such wonders hereabouts; and even the ambitious bean seldom reaches higher than a low roof; nor is its growth always sufficiently luxuriant to shade the window, for it often shares that task with a morning-glory. The plan of these leafy blinds is a pretty one, but they are too often trained in stiff and straight lines; a poetical idea, *three a quatre epingles*. Frequently we see a cottage with a door in the centre, and one window on each side, and vines trained over the sashes in this way, which gives it an odd look, like a house in green spectacles, as it were. When hop vines are used for screening the windows, which is often the case, the plant is not so easily restrained; and throwing out its luxuriant branches right and left, takes care of itself.

"Currants are almost the only fruit seen in the smaller gardens of our neighborhood; even gooseberries are not so general; both raspberries and strawberries grow wild here in such profusion that few persons cultivate them. Currants, by-the-by, both black and red, are also native plants; the black currant is by no means rare in this State, and very much resembles the varieties cultivated in gardens; the wild red currant is chiefly confined to the northern parts of the country, and it is precisely like that which we cultivate. Both purple and green gooseberries are also found wild in our woods.

"It is often a matter of surprise and regret that fruit should not be more cultivated among us in gardens of all sizes; but the indifferent common cherry is almost the only fruit tree found here in cottage gardens. Even the farmers neglect cherries, and plums, and pears, surprisingly.

"There is, unhappily, a very serious objection to cultivating fruit in our village gardens; fruit-stealing is a common crime in this part of the world; and the standard of principle on such subjects is as low as it well can be in our rural communities. Property of this kind is almost without protection among us; there are laws on the subject, but these are never enforced, and of course people are not willing to throw away money, and time, and thought, to raise fruit for those who might easily raise it for themselves, if they would take the pains to do so. There can be no doubt that this state of things is a serious obstacle to the cultivation of choice fruit in our villages; horticulture would be in a much higher condition here if it were not for this evil. But the impunity with which boys, and men, too, are allowed to commit thefts of this kind, is really a painful picture, for it must inevitably lead to increase a spirit of dishonesty throughout the community.

"It is the same case with flowers. Many people seem to consider them as public property, though cultivated at private expense. It was but the other day that we saw a little girl, one of the village Sunday-scholars, moreover, put her hand within the railing of a garden and break off several very fine plants, whose growth the owner had been watching with care and interest for many weeks, and which had just opened to reward his pains. Another instance of the same kind, but still more flagrant in degree, was observed a short time since : the offender was a full grown man, dressed in fine broadcloth to boot, and evidently a stranger ; he passed before a pretty yard, gay with flowers, and unchecked by a single scruple of good manners, or good morals, proceeded to make up a handsome boquet, without so much as saying by your leave to the owner ; having selected the flowers most to his fancy, he arranged them tastefully, and then walked off with a free and jaunty air, and an expression of satisfaction and self-complacency truly ridiculous under the circumstances. He had made up his nosegay with so much pains, eyed it so tenderly as he carried it before him, and moved along with such a very mincing and dainty manner, that he was probably on his way to present himself and his trophy to his sweetheart ; and we can only hope that he met with just such a reception as was deserved by a man who had been committing petty larceny. As if to make the chapter complete, the very same afternoon, the village being full of strangers, we saw several young girls, elegantly flounced, put their hands through the railing of another garden, facing the street, and help themselves in the same easy manner to their neighbor's prettiest flowers ; what would they have thought if some one had stepped up with a pair of scissors and cut half a yard from the ribbon on their hats, merely because it was pretty, and one had a fancy to it ? Neither the little girl, nor the strangers in broadcloth and flowers, seem to have learned at common school, or at Sunday school, or at home, that respect for the pleasure of others is simple good manners, regard for the rights of others, and common honesty.

"No one who had a flower border of his own would be likely to offend in this way ; he would not do so unwittingly, at least ; and if guilty of such an act, it would be premeditated pilfering. When people take pains to cultivate fruits and flowers themselves, they have some idea of their value, which can only be justly measured by the owner's regard for them. — And then, moreover, gardening is a civilizing and improving occupation in itself ; its influences are all beneficial ; it usually makes people more industrious, and more amiable. Persuade a careless, indolent man to take an interest in his garden, and his reformation has begun. Let an idle woman honestly watch over her own flower-beds, and she will naturally become more active. There is always work to be done in a garden, some little job to be added to yesterday's task, without which it is incomplete ; books may be closed with a mark where one left off, needlework may be thrown aside and resumed again ; a sketch may be left half finished, a piece of music half practiced ; even attention to household matters may relax in some measure for a while ; but regularity and method are constantly required, are absolutely indispensable, to the well-being of a garden. The occupation itself is so engaging, that one commences readily, and the interest increases so naturally, that no great share of perseverance is needed to continue the employment, and thus labor becomes a pleasure, and the dangerous habit of idleness is checked. Of all faults of character, there is not one, perhaps, depending so entirely upon habit as indolence ; and nowhere can one learn a lesson of order and diligence more prettily and more pleasently than from a flower-garden.

"But another common instance of the good effect of gardening may be mentioned :—it naturally inclines one to be open-handed. The bountiful returns which are bestowed, year after year, upon our feeble labors, shame us into liberality. Among all the misers who lived on earth, probably few have been gardeners. Some cross-grained churl may set out, with a determination to be niggardly with the fruits and flowers of his portion ; but gradually his feelings soften, his views change, and before he has housed the fruits of many summers, he sees that these good things are but the free gifts of Providence to himself, and he learns at last it is a pleasure, as well as a duty, to give. This head of cabbage shall be sent to a poor neighbor ; that basket of refreshing fruit is reserved for the sick ; he has pretty nosegays for his female friends ; he has apples or peaches for little people ; nay, perhaps in the course of years, he at length achieves the highest act of generosity—he bestows on some friendly rival a portion of his rarest seed, a shoot from his most precious root ! Such deeds are done by gardeners.

"Horticulture is not carried on upon a great scale anywhere in this country. We regret that this should be so. A large garden, where taste and knowledge have full scope, is indeed a noble work, full of instruction and delight. The rare trees and plants brought with toil, and cost, and patience, from distant regions ; the rich variety of fruits and vegetables ; the charming array of flowers, are among the most precious and the most graceful trophies of commerce, and industry, and adventure. Such gardens, whether public or private, are always desirable in a neighborhood. They are among the best gifts of wealth, and scatter abroad too many benefits to deserve the doubtful name of a luxury. If we have none near enough to bring good to our own rural village, it is at least pleasant to remember that other communities are more fortunate than ourselves.— When one cannot enjoy some particular good thing one's self, a very little charity, and a very little philosophy, lead one to be glad, at least, that others may profit by it.

"A very striking proof of the civilizing effect of large gardens may be seen any day in the great towns on the Continent of Europe, whether in France, Italy, Germany, &c., &c. In these old countries, where grounds of this kind have been more or less open to the public for generations, the privilege is never abused by any disgraceful act. The flowers, the trees, the statuary, remain uninjured year after year ; it never seems to occur to the most reckless and abandoned to injure them. The general population of these towns is, in many respects, inferior to our own ; but in this particular point their tone of civilization rises far above the level of this country."

We have omitted our Youth's Department, in this number, the above being so good we could not well shorten it ; but we hope all the youth who are in the habit of reading the Farmer, will read and remember this extract from Miss Cooper's book.— Pilfering and destroying the flowers of neighbors is a disgraceful act ; and yet it is quite common in our cities and villages. We suffer from it every season. It is in most cases the result of thoughtlessness and the bad example of older persons.

Editor's Table.

Gypsum and Dew.—A correspondent who writes over the signature of "Green Farmer," had a few remarks in our last number on the supposed power of gypsum to condense vapor diffused through the atmosphere into dew, which deserve a word or two of comment. He says, "In my opinion this property of retaining moisture is the main cause of the astonishing effect gypsum has on plants. I have seen on a dry sunny day, when the dew on unplastered clover has been evaporated for hours, where gypsum has been sown the dew on the leaves collected in globular balls; and hence the thought struck me that gypsum had an agency in forming these balls of water, and in doing so, it might have formed a thin transparent shell, not perceptible to the naked eye, to preserve them from speedy evaporation by solar heat."

This conjecture about a "thin transparent shell" of gypsum, or any other substance, is not well-founded. It is one of the natural effects of luxuriant vegetation, which gypsum promotes, to cool the surrounding atmosphere and thereby condense an uncommonly large amount of water in dew, which when collected in good sized drops, is slow in evaporating. These drops evaporate only in proportion to their surface; and if one was spread over ten times the area the liquid would disappear, or be taken up by the atmosphere, in one-tenth of the time. If a globule of dew was as large as a hen's egg, it would often last from morning till night. It is the clover that causes the excess of dew, and the gypsum the excess of clover.

Grazing in Tennessee.—A gentleman writes us from Tennessee, who is settled in one of the beautiful valleys in the eastern part of the State, that he makes a business of rearing three year old steers and heifers at six dollars a head, and finds it profitable. A friend who is engaged in stock-growing in the Cherokee country, upper Georgia, has engaged all the Devon calves from the celebrated herd of George Patterson, Esq., Maryland, for two years, at $100 a head when six months old. A half dozen young men (married of course) might, by uniting their means, talent and industry, realize fortunes by stock-growing and the dairy business, in the elevated portions of Virginia, or in any of the States south of it. Good butter is worth, this 6th day of June, 30 cts. a pound in the city of Washington, and fine lambs sell at $2.00 and $2 50 a head. Mules and horses are too high to name. By taking ten mules in a lot, a friend was able to get them for $1800. The dams which bore and nursed these mules, more than paid their way in farm work. We venture to suggest a company to carry on the business indicated, because it needs considerable capital to start with, and the benefit of good society in the families of persons reared from childhood in the same section, and with congenial views and feelings, is an object of great importance. There are richer mines in the Atlantic States than any in California.

New Agricultural Journals.—Several new monthly agricultural journals have entered the field the present year, showing a demand for reading on this subject.

The *Ohio Agriculturist*, published at Tiffin, O., by Dr. Sprague. Price $1.00 per annum.

The *Pennsylvania Farm Journal*, edited by S. S. Haldeman, Lancaster, Pa. Price $1.00.

The *Soil of the South*, published at Columbus, Ga. Price $1.00.

The *Western Agriculturist*, edited by W. W. Mather, Columbus, Ohio. Price $1.00.

These Journals all bid fair to be useful, and we hope they will be well sustained, as they certainly deserve to be.

A Hint to Meat-Makers.—Bring all young animals intended for the butcher rapidly forward in flesh, and sell them early. Farmers in Gloucestshire, England, rear lambs that weigh from twenty to thirty pounds per quarter, when from thirteen to fifteen months old, and, of course, they fetch a high price The same rule holds good in pigs, steers, and heifers. Calculate what they consume every week and what they gain in flesh and value. The Cotswold and improved Leicester sheep above alluded to, which grow so rapidly, are in great demand in all parts of England and Ireland for crossing with other breeds.

Correction.—On page 130, in the first column, the important word *not* is omitted in the June number of this journal in the following sentence: "Every observing farmer knows that any given quantity of manure does produce equal results on all fields." Read, "does not produce equal results."

Improvement in Maryland.—A gentlemen writing from Cecil co., Md., gives us the following gratifying intelligence: "I have just returned from a visit on the lower part of the eastern shore of this State, some fifty to seventy miles south of this place, and find there is quite a spirit of improvement getting among the farmers there. They are reducing the size of their farms from 500 to 200 and 300 acres, and are also employing fewer slaves and more white laborers. The change is principally brought about by the labors of Dr. Higgins, the State Agricultural Chemist, who has been analysing the soils and lecturing through the different counties of this shore."

The next State Fair.—The President and Executive Committee of the State Society, aided by the citizens of Rochester, are consummating their arrangements for the next State Fair, as speedily as possible. We have an idea that Western New York will do herself credit; and we wish our friends, in making their arrangements for the season, always to bear in mind the Great State Fair to be held at Rochester, Sept. 16, 17, 18, and 19.

To Correspondents.—We are often requested to return communications if not accepted, and sometimes to return the manuscript after copying. This we cannot do. If correspondents wish to preserve manuscript copies of their articles, they must make their own copies.

Advertisements to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to the farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance.*

Subscribers from July.—Quite a goodly number have accepted of our offer to take subscribers for the last half of the present year, commencing with our July number, *at one-half our usual rates* for the volume. We can supply many more.

Hints for July.—Hoe and plaster corn, set cabbages, and get everything out of the way preparatory to the great battle with the grass and grain. See that forks, scythes, &c., are in order. Cut wheat before it is quite ripe, better a little too early than too late. The following is Prof. Norton's opinion:

"The time of cutting grain very sensibly affects the proportion of fine flour and bran yielded by samples of it. Careful experiments have shown, with regard to wheat, that when cut from 10 to 14 days before it is fully ripe, the grain not only weighs heavier, but measures more; it is positively better in quality, producing a larger proportion of fine flour to the bushel. When the grain is in the milk, there is but little woody fibre; nearly everything is starch, gluten, sugar, etc., with a large per centage of water. If cut 10 or 12 days before full ripeness, the stock of woody fibre is still small; but as the grain ripens, the thickness of the skin rapidly increases, woody fibre being formed at the expense of the starch and sugar; these must obviously diminish in a corresponding degree, the quality of the grain being of course injured. The same thing is true as to all of the other grains."

Buckwheat should be sown early this month, say three pecks to the acre; and round turnips the last of this month.

PROUTY & MEARS' CELEBRATED PREMIUM CENTER DRAUGHT PLOWS. A large assortment can be found at the State Agricultural Warehouse, No. 25 Cliff street, New York.
[5-3t] G. H. BARR

Prouty & Mears' Center Draft Plows.

A LARGE assortment can be found at the State Agricultural Warehouse, No. 25 Cliff street, New York.
[6-4t] G. H. BARR.

Manures.

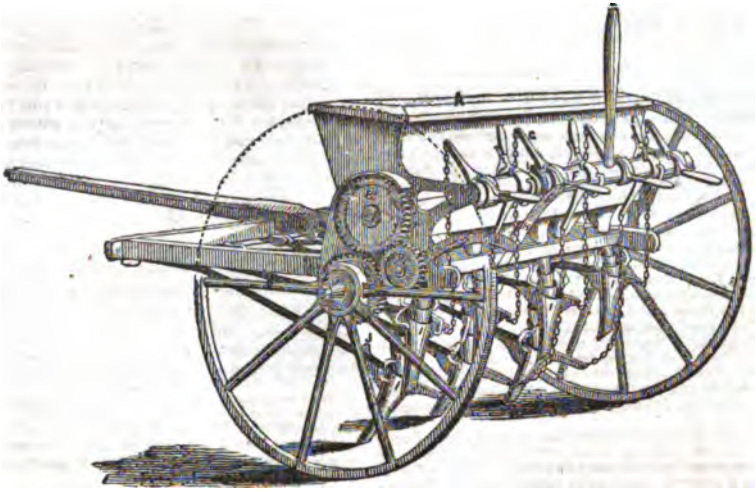
PERUVIAN Guano, at 2½ cts. per lb.; Bone Dust—sawings shavings, and crushed—at $2.25 cts. per barrel; Bone Black, or Burnt Bones, at $3 per hogshead; Bone Waste, or Bone Manure, at 1¼ cts. per lb.; Sugar House Scum, or Bullocks Blood, at $2.50 per hogshead; Sulphate of Soda, at 1 cent per lb.

Packages included at above prices. For sale at the State Agricultural Warehouse, No. 25 Cliff street, New York.
[6-4t] G. H. BARR

Imported Consternation.

THIS celebrated thorough bred Horse will stand the present season, as heretofore, at the farm of the subscriber, two miles west of Syracuse.

In order that farmers, of the most limited means even, may be enabled to breed from this valuable horse, the subscriber has consented to offer his services at the extraordinary low price of $7.00 —payable in advance in all cases—reserving the right to reject mares that are deemed unsuitable. Pasturage, well fenced and well watered, at three shillings per week. Mares to be entirely at the risk of their owners. J. B. BURNETT.
Syracuse, May, 1851. [5-3t]



TO THE FARMERS OF WESTERN NEW YORK.

BICKFORD & HUFFMAN'S PATENT GRAIN DRILL,

MANUFACTURED AT MACEDON, WAYNE COUNTY, N. Y.

THE great superiority of the Drill system over the old mode of sowing grain broadcast must be obvious to every intelligent cultivator of the soil. A saving at least of 20 per cent. of seed and nearly as much in labor—a manifest increase in the product—a great safeguard against drouth, and the effects of frost,—are all matters of moment to the enterprising farmer. Of scarcely less moment, however, is the satisfaction to be derived from the beauty and certainty of the operation. "He that runs may read" in the perfect distribution of the seed, and the uniformity of its growth, the reward of the labor bestowed, and will contrast the appearance of such a field with the patched and irregular appearance inseparable from hand sowing. As a matter of course, the demand for implements of this description has induced machinists in various parts of the country to engage in their construction. We, by no means, wish to undervalue the merits of these, but we desire to be understood as distinctly asserting that the Drill which we manufacture is more perfect as a whole, than any other in this country. The thought and labor bestowed upon it, and the complete success which has crowned our efforts, warrant us in challenging the utmost scrutiny, whether in the practical workings, or in the neatness, simplicity and adaptation of every part. Since last year we have added an iron casing to the geer work, to guard against possibility of accident, and have also disposed the drill tubes in two parallel rows—the front row being seven inches forward of the back row, and sowing the grain in rows seven inches apart, thereby facilitating the passage of the drill tubes among the stones and clods.

Of the great number sold, not one has been returned, although each is warranted to sow all kinds of grain with accuracy, and satisfactory to the purchaser, and to be made in a workmanlike manner. Subject to this warrant, we respectfully invite a free trial of the merits of this most useful implement, with the full conviction that the public, and ourselves, will be the gainers thereby. It gives us great pleasure, as a confirmation of our statements, to refer, among others, to the following gentlemen, many of whom are well known to the community as well for their agricultural skill as for their position and respectability.

To the "Scientific American," of April 12th, in which appears a highly complimentary and detailed description of the Drill, by the Editor, and to

Col. J. M Sherwood,	Cayuga co.	Alfred Hale,	Wayne co.
Abram Willis,	“	H. W. Levanway,	“
Henry Chase,	“	Col. Briggs,	“
Wm. Dean,	“	Thos. Knight,	“
Abram Reynolds,	“	Samuel Peacock,	“
Henry Purdy,	“	Denice Denice,	“
John King.	“	Israel Woolsey,	“
Amos R. Willits,	“	Isaac Reynolds,	“
Isaac Jacobs,	“	Gideon Ramsdall,	Monroe co.
Stephen Sisson,	“	Wm. Lloyd,	“
John K. Archer,	Seneca co.	Hiram Martin,	“
H. O. Murray,	“	Alex. Martin,	Livingston co.
James Quick,	“	Curtis Parker,	“
John C. Hall,	“	Jeptha Wilbur,	“
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Josiah Taft,	“	Jefferson Verry,	“
T. R. Peck,	“	Wm Fullerton,	“
Morris Rushmore,	“	C L. Marshall,	“
Jared Smith,	“	Judge Bates,	Orleans co.
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Price of 7 tube Drill,	$65.00
“ 9 “	75.00
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delivered at Canal or Railroad.

All orders thankfully received and promptly attended to.

Macedon, N. Y., July, 1851. BICKFORD & HUFFMAN.

IMPORTANT TO MILLERS.

The American Miller and Mill-Wright's Assistant,

THIS is the most valuable book for practical Millers and Mill-wrights, extant. It is a new work recently published by Wm. C. Hughes, who is himself a practical Miller, and has spent the best portion of his life in the business of constructing, planning, and managing of Flouring Mills and the manufacture of flour. In preparing this work for the Milling public his object has been to establish a correct guide to the business, instead of speculative theories. Special regard has been paid to most of the essential improvements which have of late been introduced for the benefit of the Miller.

A few of the important subjects treated of and here given, taken from the contents of the work, are

Water power calculated for all heads; The size of the wheels for all heads, with the amount of water necessary to use on the same; The entire science of dressing the Mill Stone, with a practical treatise on Grinding; Remarks on the Culture of Grain; &c.; Table of Grain grown in the United States; Explanation of Technical terms used in Milling; The Quality of French Burr, as best adapted for grinding Wheat and Corn; The proper size of Mill Picks for dressing Stones; Composition for Tempering Cast-steel Mill Picks; The amount of Help necessary to be employed in a Mill of four run of Stones, with their dutie respectively; Remarks on Packing Flour; Table for Packing Flour; &c., &c.

No Miller or Mill-wright should be without the Book, as the price is nothing in comparison to the value of the information it contains. The following Millers in Michigan, having examined the work fully approve of and recomend it to public notice;

Mathews & Beach, Pontiac;
R W Lawson, Mt. Vernon Mills,
E R Brookfield, Volant “
J W Fenner, Mt. Pleasant “
W W Eddy, Sturger's Prairie “
L Dow Crippen, Cold Water “
D P Bonnell, Tecumseth Mills;
Charles W Chapel, Utica “
E Brakham, Rochester City “
E Carpenter, Pontiac
J W Hughtlin, Charleston “
J Cupit, Stony Creek “

A long list of others might be given, but it is thought unnecessary.

Mr. Hughes has recently been appointed Flour Inspector at Buffalo, a very important post, showing the confidence the Millers and Shippers have of his ability.

The book is 12mo. size, and done up in good strong binding. Price, $1.50, at retail. ☞ Any person sending me *three dollars* by mail, and paying postage, shall have two copies sent him, done up in paper binding, (the only mailable way,) free of charge, or four copies for $5.

Books sold to pedlars and agents at reduced prices.

GEO. W. FISHER, Bookseller and Publisher,
Rochester, June, 1851. No. 6 Exchange st.

A. LONGETT,

COMMISSION MERCHANT, Office at the State Agricultural Warehouse, No. 25 Cliff street, New York.

☞ THE WORKING FARMER, a monthly publication devoted to Agriculture, &c. &c., edited by Prof. J. J. Mapes, and published by A Longett, 25 Cliff street, New York. [7-4t]

A New Work on Fruit.

CHARLES SCRIBNER (late Baker & Scribner) has just published

"THE FRUIT GARDEN,"

A Treatise intended to illustrate and explain the structure and character of the different parts of fruit trees — the theory and practice of the various operations connected with the propagation, transplanting, pruning and training of orchard and garden trees —the laying out and arrangment of various kinds of orchards and gardens, selection of varieties, treatment of diseases and insects, gathering and preserving fruits, &c., &c.—*illustrated with upwards of One Hundred and Fifty Figures.* By P. BARRY, of the Mount Hope Nurseries, Rochester, N. Y. 1 vol. 12 mo.

SUMMARY OF CONTENTS.

PART I. Describes the different parts of Fruit Trees—Roots, Stems, Branches, Leaves, Blossoms and Fruit; explains their different Characters, Functions, and Practical Classifications. It treats, also, of Soils and Manures, of the best Modes of Propagation, and the General Principles and Practice of Pruning.

PART II. Treats of the Propagation and Management of Trees in the Nursery in detail, both Standards and Dwarfs, beginning with the Stocks and ending with taking up the Trees.

PART III. Treats of the Laying Out and Arrangements of different kinds of Orchards and Fruit Gardens, the selection of Trees and of varieties, Planting, Pruning, and Training of Standards, Dwarf, Pyramids, &c., &c.

PART IV. Contains Abridged Descriptions of all the best Fruits of well-established merit, with selections for various purposes and localities, and lists of new and promising varieties; also, a Chapter on Diseases and Insects; another on Gathering and Preserving Fruits, and one on the more important Implements used in Fruit Culture.

NOTICES OF THE PRESS.

"This admirably arranged volume possesses an almost incredible amount of condensed information, given, too, in so earnest and easy a manner, that, despite of the really heavy freight the mind is taking in on its way, the reader is carried on from chapter to chapter, like a smoothly running car, and we suspect few could put it by unfinished without regret, or renew its perusal without a pleasurable certainty of entertainment or profit; and we would especially call attention to the first chapter, for, remembering our own ignorance, and the no less bungling efforts of our neighbors and friends, in any operation of tree surgery, we feel how thankful we should have been if we could have availed ourselves of Mr. BARRY's kindly offered solution of the many mysteries that puzzled us then."—*Home Journal.*

"A valuable, because simple and practical, work upon fruits and fruit trees in America. The book is illustrated with drawings well calculated to assist the fruit grower, and it should be in the hands of all who have a patch of land, or who love good fruits. — *North American Miscellany.*"

"A mass of useful information is here collected, which will give the work a value even to those who possess the best works on the cultivation of fruit yet published."—*New York Evening Post.*

"This is, in brief, the title of a neat volume of about 400 pages, prepared with evident care and ability by P. BARRY, of the firm of Ellwanger & Barry, proprietors of the increasingly celebrated 'Mount Hope Nurseries.' The author is not only well read on the subject on which he treats, but in addition to his theoretical and scientific qualifications, he possesses a practical knowledge of the subject, in all its branches and bearings, that few writers have ever enjoyed.

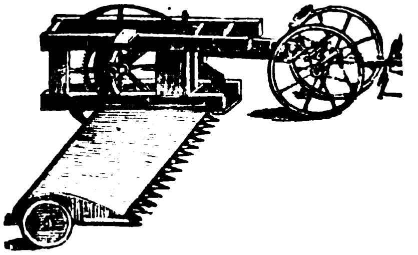
'The work before us seems to be a thorough treatise upon the properties, modes of culture and most desirable qualities of fruits in general, with selections and descriptions of the most approved varieties for especial as well as general use. And the experience of the writer in the selection and rearing of the vast and superior varieties of fruit in Western New York—the great fruit garden of the country— as well as his familiarity with all the most approved varieties of eastern and foreign fruits, invest his book with a degree of authenticity and reliability well calculated to secure to it the utmost confidence.

'Every fruit grower, whether large or small, should procure a copy of this excellent work."—*Rochester Daily Advertiser.*

"Our townsman, Mr. P. BARRY, has done great service to the cause of fruit culture and ornamenting of court yards, in this new treatise of his. The work, as the title page explains, is designed to illustrate the physiology of fruit trees, and the theory and practice of all operations connected with the propagation, transplanting, pruning and training of orchard and garden trees. It also gives many and valuable ideas upon the laying out and arranging of orchards and gardens, and, in short, is a very encyclopedia of all information pertaining to fruit and fruit culture. It is from the pen of one in the highest degree competent for the task he has undertaken, and is illustrated by many plates and figures. It is a book that should, as it will, command a ready sale wherever its author is known, and among all who desire a first rate treatise upon the subject, from a practical hand. Mr. BARRY wields his pen in a manner that does credit to him, and well illustrates the the possible union of cultivation of the soil and cultivation of the mind."—*Rochester Daily American.*

"It is, externally, a most pleasant appearing volume of nearly 400 pages, printed in elegant style. To all who take an amateur's delight in the cultivation of fruit trees and fruit bearing vines, the information embodied will be of great use."—*Rochester Daily Democrat.*

CHARLES SCRIBNER,
No. 36 Park Row, and 145 Nassau St., New York.



HUSSEY'S REAPING MACHINE.

WE would respectfully call the attention of farmers to the fact that we have the agency and the sale of the above named Reaper in all that part of the State of New York west of Ontario county, and we are also general agents for the United States and Canada. We sell the Reapers at the Manufacturer's prices, adding only cost of transportation. They can be examined at our Store. All who design purchasing are earnestly requested to hand in their orders at once, as this will enable us to have on hand in season all that may be required, and prevent any being disappointed, as might be the case if orders were delayed till the harvest had begun. That they are the best Reapers made, and that it would be greatly to the advantage of farmers to have them, there is no doubt.

Annexed are a few of the many certificates which might be given:

Macedon, Sept, 1850.

Messrs. Rapalje & Co.—Gents:—The Reaping Machine bought of you, made by Messrs. Hussey & Co., at Auburn, has been thoroughly tested by me the present harvest, and I am happy to say has exceeded my most sanguine expectations. I have cut with it 125 acres of wheat, besides my own crop, making some 200 acres of oats and wheat; and I can confidently recommend it to my brother farmers as just the machine they want. I have cut 12 acres of oats in half a day, and 20 acres of stout wheat in one day, with three horses abreast, and most of it was bad cutting. I think I can cut 25 acres of good wheat in a day, and do it better than can be done in any other way. My machine is now in perfect order, and I consider it full as good as when I got it of you.

Yours, most respectfully, THOS RUSHMORE.

Wheatland, April 29, 1850.

Messrs. Hussey & Co.—Gents:—I have now used one of your Reaping Machines for two years and do most cheerfully say that it has given the best satisfaction. I have cut my whole harvest, and a large one too, with my ordinary farm hands. I have cut 20 acres of stout wheat a day with ease, and I would most cheerfully recommend it to my brother farmers as the best and most economical machine that is used on a farm. In fact I think so much of it, that five hundred dollars would not induce me to part with it if I could not get another. I have also two brothers, each of whom have one of your machines, which they like very much, and could not be induced to be without. I think your agents, Messrs. Rapalje & Briggs, will sell a large number of them in our county next season, as many of my acquaintances have told me they intend to purchase one of your Reapers another season. ANAN HARMON.

Bergen, May 10, 1850.

This is to certify that I last season used one of Hussey's Reaping Machines, which I purchased of Messrs. Rapalje & Co., of Rochester, and that it gives perfect satisfaction. I have cut my wheat, which was very badly lodged, much faster, better and cheaper than it could be done any other way. I have had one of McCormick's for the last five years, and it now stands in the road as a useless article, as I consider it, having tried to use it for three years without any success.

I consider Hussey's Machine just the thing for our farmers, and I could not now, after proving its merits, be induced to be without one. NOAH WILBUR.

We might give hundreds of other references of the same kind, but we deem it useless, as the reputation of the Machine is so well established that almost every farmer in the State know it to be the best Machine for cutting grain yet in use.

Farmers will please call on us at as early a day as possible, at the Genesee Seed Store and Agricultural Warehouse, 65 Buffalo St.

Rochester, July, 1851. J. RAPALJE & CO.

Harrows.

WE invite the attention of the farmers of Western New York to our large and superior assortment of Harrows—the best ever offered in this market. Among others we have Geddes' Harrow, Scotch Harrow, Square Harrow, &c., &c., of various sizes, and prices ranging from $10 to $12.

Please call at the Genesee Seed Store and Ag. Warehouse, No. 65 Buffalo st., Rochester, and examine for yourselves.

June 1851. J. RAPALJE & CO.

Subsoil Plows.

WE are now receiving our spring supply of the various sizes of this justly celebrated Plow, direct from the manufacturers, Messrs. Ruggles, Mason & Co., of Boston. We sell the Plows at the Boston prices, without charge for transportation, at the Genesee Seed Store and Agricultural Warehouse, 65 Buffalo st.

June 1851. J. RAPALJE & CO.

EMERY & CO.'S

NEW YORK STATE AGRICULTURAL SOCIETY'S

FIRST PREMIUM

RAILROAD HORSE POWER,

AND

OVERSHOT THRESHER AND SEPARATOR.

THE attention of the farming public is solicited to the newly improved Railroad Horse Power, as now made by the subscribers. Also to their Overshot Spike Cylinder Threshers, with Vibrating and Revolving Separators.

Having had much experience in the sale and manufacture of Horse Powers and other Agricultural Implements, and being acquainted very extensively with the wants of the farmers of this country, as well as the character of most of the implements and machines now in use, we think we hazard nothing in pronouncing our latest improved Horse Power far superior to any before made or sold by us, or with which we are acquainted.

At the late Fair of the New York State Agricultural Society, held at Albany, their committee on Horse Powers unanimously awarded us the highest premium for the best Railroad Horse Power, among the large number of the most popular and approved kinds of the day which were on exhibition and in competition,— it being considered the most efficient and durable on the ground.

As the principal mechanical parts of its construction differ so materially from those mostly sold by us, previously to the past season, as well as from all others now in use, we have thought it an object to the farmers, as well as for our own interest, to illustrate them by cuts and descriptions, as shown in the Farmer for March The advantages of the recently adopted improvement are numerous and plainly seen, one of which is removing all the gearing and wearing parts to the outside of the Power, where it is free from dust and dirt, &c., and where it may be boxed up, requiring little time or oil to keep them in the best possible running order.

The liability of breakage and wear, and slipping off links and pinions, as in the rack and pinion powers, and most others, is wholly removed. In shipping them, the gears are taken off and packed in a box with other things.

Having sold a large number of the IMPROVED Machines the past harvest, all of which having given entire satisfaction, and when used side by side with the most approved of other kinds, having been preferred, we do not hesitate to recommend and warrant them equal, if not superior, to any before made or sold by us, or of which we have any knowledge.

Our Thresher consists of a small spiked cylinder, about fifteen inches in diameter, and twenty-six inches long, with a substantial spiked concave above this cylinder, which is adjustable to the work to be done. The feeding table being level, allows the feeder to stand erect, and is little annoyed with dust and dirt—and no possibility of hard substances getting into the Thresher to its injury.

We attach a vibrating or revolving separator to them, which serves to separate all the grain from the straw, and leave it with the fine chaff for fanning mills, while the straw is carried off for stacking.

Having heretofore been obliged to have a large portion of some parts of our work done by contract, we have felt the inconvenience and want of dependence to be placed upon the quality of materials and workmanship; we have now so extended our facilities as to enable us to make all parts of all our own machines, and can now assure the public that none but the best work and stock will be offered by us.

The Two Horse Power Thresher and Separator is capable, with three or four men, of threshing from 150 to 200 bushels of wheat or rye, and the single one from 60 to 100 bush., or double that quantity of oats, per day.

The price for Emery & Co.'s one Horse Power,	$85.00	
do do Thresher and Separator,	35.00	
do Bands, wrench, oiler and extra pieces,	5.00	—$125.00
do Two Horse Power,	110.00	
do do Thresher and Separator,	35.00	
do Bands, oiler, wrench, &c.	5 00	—$150.00
Price of Emery's Thresher and Cleaner, with bands, wrenches, &c.,		$75.00
do Saw Mill, complete for use,		35.00
Price of Grant's Fan Mills, adapted for hand or power from,		$22.00 to 28.00

Also, Wheeler's Rack and Pinion Power, manufactured by ourselves, and warranted equal to any of the kind in use, (or made and sold by and other manufacturer.) which we sell with a full guarantee of the right of using the same in any territory of the United States, for the following prices:

One Horse Power,	$75 00
Two Horse Power,	100.00

The Threshers not being patented are the same as above quoted.

All the above are subject to the warranty of three months use and trial, and if not satisfactory may be returned and full purchase money refunded.

For further particulars see Illustrated Catalogue, furnished gratis on application to EMERY & CO.,

Original and sole Proprietors of the Albany Agricultural Works, Warehouse and Seed Store, Nos. 369 and 371 Broadway, Albany N. Y.

July, 1851.

NEW YORK WIRE RAILING WORKS.

WIRE RAILING.

[SECURED BY LETTERS PATENT.]

ENCLOSURES FOR PUBLIC GROUNDS AND CEMETERIES; Fences for Cottages, Gardens, Farms, &c.

Window Guards and Gratings, for Stores, Dwellings, Lunatic Asylums, Prisons, &c.

Columns and Cornice Work for Cottages and Verandahs.

The above are made entirely of Wrought Iron and Wire, at one half the cost of Cast Iron, being extensively used in the city of New York, &c.—Superceding all other kinds of work for the same purpose.

RAILROAD AND FARM FENCE,

Made with Wrought Iron or Wooden Posts, being so constructed as to be used for moveable or permanent fence, at 80c. to $3 per rod.

Wire for Fences always on hand.

Portable Iron Bedsteads, Iron Statuary, Greyhounds, Dogs, Lions, &c.

Wrought and Cast Iron Railings made to order.

By addressing the Manufacturer and Proprietor, Circulars and drawings of the above will be forwarded.

JOHN B. WICKERSHAM.
Works, 59 and 61 Lewis Street. 240 Broadway.
AGENTS—C. B. Conant & Co., 215 Pearl street, New York.
New York, June, 1851.

For Sale.

A FARM in the easterly part of Walworth Co., Wis., on the plank road leading from Racine to Janesville. Said farm is well located in a healthy, pleasant and thriving part of the State, and is well calculated for a large farm, or it can be conveniently divided into three or more small ones, and each be well supplied with wood and water. The general surface has an inclination South and East.

In the center, where the buildings are now located, there are four or five hundred fruit trees, of the various kinds. Some have commenced bearing, so that the occupant now enjoys a comfortable supply of delicious fruits. There are about 200 acres under the plow.

In fact, so far as good roads to important places—Mills, School Houses, nurseries, &c.—are concerned, this place is as well located as we could desire. But as no one will purchase upon the strength of this notice without first viewing the place, it will only be necessary for one to call and satisfy himself, when a trade can be made on accomodating terms.

Any information can be obtained in reference to the same, by addressing A. G. COLE, at Burlington, Racine Co., Wisconsin.

June 1851. (6-2t-8*)

"SPEED THE PLOW."

Genesee Seed Store and Agricultural Warehouse.

THE Subscriber's beg leave most earnestly to call the attention of the farming community to the fact that they have just received a supply of the popular and modern improved implements used in Agricultural and Horticultural pursuits.

They would particularly invite all interested, to the well established Mass. Eagle Plows, in a series of 24 different sizes, manufactured by Ruggles, Nourse & Mason. Also the latest and most approved kind of Seed Planter, invented by the same firm.

We have also on hand the well known Curtis or Albion Plow, of various sizes and extra manufacture.

Wheeler's Horse Power, Thresher and Saw Mill.

Hussey's celebrated Grain Reaper.

Pennock's Wheat and Grain Drill.

As also a complete assortment of Field and Garden Seeds, both domestic and imported.

J. RAPALJE & CO , Irving Block,
June 1851. 65 Buffalo st., Rochester.

Emery & Co.'s Horse Powers and Threshers.

EMERY & CO.'S Premium Railway Horse Powers and Threshers, which were awarded the first premium at the last State Fair, in competition with many others, for sale at the State Agricultural Warehouse, No. 25 Cliff street, New York.

[6-4t] G. H. BARR

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Burral's New Reaper.

AT the late State Fair, at Syracuse, the first premium was awarded to Mr. Burral for the best *Grain Reaper*, in competition with Hussey's and McCormick's—both present. Since that time it has been improved in many respects, and is now unquestionably the best Machine for the purpose before the public. It was thoroughly tested the last season in the same field with Hussey's and McCormick's, and pronounced by all present far superior to either. It is so geered that it runs light, can be drove either slow or fast, and cuts either wet or green grass, or lodged wheat, without clogging. These are important qualities in a Reaper all know who have been bothered in the use of Hussey's and other Reapers, from a lack of these qualities. The manner of raising and lowering the apron, and throwing the Machine in and out of geer, are also improvements. But without particularizing further, we would say, that having been interested, the last two years, in the sale of the Hussey Reapers, we know its good and bad qualities, and have had considerable acquaintance with other Reapers. We can point out the differences between the Burral Reapers and others, and show wherein the Burral Reaper is superior. All who are thinking of purchasing Reapers are invited to call at our store and examine the Machine and hear what we have to say in regard to Reapers generally. The Reaper is warranted, and will be put to work for the purchaser by us, if desired, free of charge, if we do not have too far to go.

We have the exclusive sale of them in this city, and sell at the manufacturer's prices, adding transportation.

BRIGGS & BROTHER,
Rochester, N. Y., July, 1851. No. 68 State Street.

State Agricultural Warehouse.

THE subscriber would respectfully invite the attention of Farmers and Planters to his varied assortment of *Agricultural and Horticultural Implements*, among which may be found Prouty & Mear's celebrated and highly approved Center Draught Plows. Emery & Co.'s Improved Railroad Horse Power and Thresher, (all of which took the first premiums at the late State Agricultural Fair, and are unequalled by any now in use.) together with a full assortment of the the latest and most improved Plows, Straw Cutters, Fanning Mills, Corn Shellers, Seed Sowers, Cultivators, Harrows, &c., &c., which he will sell at as low rates as any similar establishment in the United States.

I shall at all times have on hand a full stock of Field and Garden Seeds, Guano, and all other Fertilizers in the market, which may be had on the most reasonable terms.

Persons purchasing articles from me may rely upon their giving satisfaction, as I intend keeping only such as I can fully warrant.

GEO. H. BARR,
[7-3t] No. 25 Cliff street, New York.

Guano.

A FEW tons of pure Peruvian Guano just received and for sale low. by J. RAPALJE & CO.,
Rochester, July, 1851. No. 65 Buffalo St.

EMERY & CO.'S
NEW YORK STATE AGRICULTURAL SOCIETY'S
FIRST PREMIUM
RAILROAD HORSE POWERS.

THE above justly celebrated Powers, as now made and sold by the subscribers, are offered the public with the assurance that they are all they are represented—they having been very extensively and thoroughly introduced and tested side by side with all the Tread Powers known of note in the country, and been preferred.

The Chairman of the Ag. Society's Committee on Horse Powers, in a communication written some months after the awarding of premiums to the above Horse Power, says: "I spent much time at the late State Fair (Sept. 10th) at Albany in examining the various Horse Powers, viz., Wheeler's, Allen's, Ham's, and Emery & Co.'s, first with the *owners and makers* and heard all they could say, and again in their absence, and the result most fully convinced me that yours was the best, and if I wanted one, I would give Twenty Dollars more for yours than for any other on the ground; and as you won your laurels fairly, it is just that you should receive a full reward." He further says, "You know from experience, I have no partiality for your establishment, and as a committee man of said Society for years, I have decided oftener against you than for you; and if others have a better article than you, I would decide in their favor though it ruined your establishment, and, vica versa, hurt whom it may."

With the testimony of such men as the author of the foregoing, which, together with changeable geering, and other important improvements since last season, make it the most *convenient, durable, efficient and economical* Power now made; and the public may rest assured of being furnished by us with a *superior* machine.—For further particulars please see Catalogue of Albany Agricultural Works, and former advertisements, &c.

Albany, July, 1851. EMERY & CO.

The Cheapest Newspaper in Western New York.

THE ROCHESTER AMERICAN is published Daily, Tri-Weekly, and Weekly, by Lee, Mann & Co. The American supports the National Administration, and advocates the principles and policy of the Whig Party. It contains the latest and fullest intelligence by Telegraph and the Mails—Congressional and Legislative Reports—Literary Selections, Tales, Commercial Intelligence, Cattle Markets, &c., &c.

The *Weekly American* is of the mammoth size, and unsurpassed as a Family and Business Newspaper.

TERMS.

The Daily American, by Mail, for one year,	$6.00
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The Weekly American, single subscribers, in advance,	1.50
" " " to Clubs of Ten, or more,	1.00

☞ All Post Masters are authorized to act as Agents for this paper, and have power to frank subscriptions and money to us.

☞ Address LEE, MANN & CO., Rochester, N. Y.

A. A. Morgan, Dentist,

OFFICE corner of North St. Paul and Main sts. Ever at the old stand ready to insert teeth on plate in all variety of forms, with every improvement of the day. Atmospheric plates, and entire setts with or without springs, made at short notice. Natural teeth and fangs removed with a trifle of pain and inconvenience, and their places immediately filled with artificial ones if desired.

Decayed natural teeth carefully filled with Gold and Tin, so as to preserve them during life.

MORGAN'S Gold and Tin Foil always on hand and for sale.
Rochester, June 20th, 1851.

New Oxfordshire Bucks For Sale.

THE subscriber has a number of yearling and two year old Bucks which he will sell any time when called for, and has no hesitation in saying that this breed of Sheep are superior to all others, for large carcass, heavy fleece, early maturity, and constitution, and defies competiton with all other breeds for profit. This flock, which has been bred from some of the best ever imported, is so well known they need no further description than to say that the sire clipped 18 lbs. of washed wool, and weighed 361 lbs. alive. Gentlemen are invited to call and see for themselves, or communicate by mail Direct to CLAYTON B. REYBOLD,
[6-4t] Delaware City, Delaware

THE GENESEE FARMER,

VOLUME XII, FOR 1851.

Fifty Cents a Year, in Advance.

Five Copies for $2; Eight Copies for $3, and any larger number at the same rate.

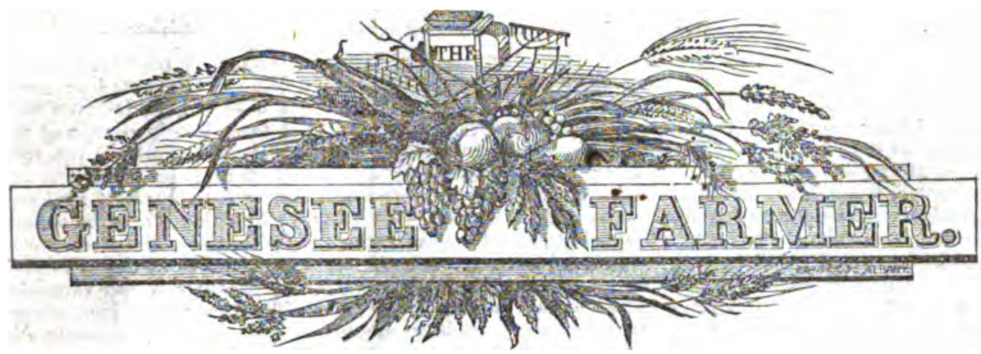
☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ Post-Masters, Agents, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post-paid or free,) at the risk of the Publisher. Address to

DANIEL LEE,
December, 1850. *Rochester, New York*

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.



Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

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A CONGRESS OF AGRICULTURE.

Although there is not a little ignorance in France, as there must be in all nations whose population exceeds thirty-five millions, yet we are inclined to believe that it contains more science, and more of the elements of agricultural progress, than is to be found in any other equally populous and extensive country on the globe. Certain it is, that the thirty-five and a half millions of people in republican France contrive to subsist very comfortably, judging them by the European standard, and export more pounds of flour and wheat to England than any other nation on either side of the Atlantic. While the inhabitants of the British islands find it necessary to buy of other countries over ten million quarters of grain a year, (85,000,000 bushels,) and import 116,000 tons of guano and an incredible amount of oil-cake, from Russia, the United States, and elsewhere; France, with a population a fourth larger to feed, imports very little manure, and still less of human food. Great facts like these are worthy of the profoundest consideration of the citizens of this Republic. It has been well said that "history is philosophy teaching by example;" and of all history, that of *the present* is most instructive, most truthful, and most deserving of earnest and patient study. "The institutions of society, like the laws," says the French minister, "which satisfy the real wants of the public, do not spring up *spontaneously*. Their history shows us that they are always called for beforehand by the public will, preceded by isolated efforts and partial attempts up to the auspicious moment when the legislator, constrained by the general sentiment, and enlightened by the experiments already made, finds, so to speak, the basis and the materials already for the new edifice called for by the new wants of the country."

The above is sound doctrice, and among the many useful institutions called for by "the public will, to satisfy the real wants" of France, its "Central Congress of Agriculture" stands conspicuous. This Congress is composed of 600 delegates chosen by the various agricultural societies of the republic—is a permanent body, which convenes once a year, and has a president and secretary to carry its official acts into effect. Its sessions continue from one to two or three weeks, as the agricultural interests of the nation seem to require. Every intelligent reader will see at a glance the value of such an organization. It has appointed a committee of scientific and practical farmers to attend the grand exhibition in London, and purchase one of each new implement of obvious value, not now in use in France, as a model from which others can be constructed, make drawings of new machinery which it may not be convenient to buy, and collect useful knowledge from every attainable source. M. Maureny, chairman of this commission, has commenced his labors by an interview with the committee of the Royal Agricultural Society, at which he presented to the Duke of Richmond, president of the Society, a set of the proceedings of the sister Society, or Congress, in France. This Congress keeps two or three gentlemen of sound judgment constantly abroad, attending all agricultural and horticultural exhibitions, gathering rare and valuable seeds and plants, as well as studying the improvements made from year to year, in constructing barns, stables, and stercoraries, and all contrivances for draining and irrigation. Rural economy, including tillage, husbandry, the breeding of domestic animals, the daily care of stock, fruit and forest culture, presents a wide field for critical observations and universal advancement.

We have often had occasion to dwell on the fact, in writing for other journals, that the United States is the only civilized nation in the world which has no national society of any kind, either agricultural, horticultural, or botanical, to introduce valuable plants, fruits, and seeds, from abroad; and yet, no other country has a wider range of climate and soil to meet the natural wants of the vegetable kingdom. The British East India Tea Company produce about 200,000 chests of tea a year, on land no better adapted to the culture of this great staple than millions of acres in the southern States. A new variety of mammoth hemp has recently been introduced into France from the east, which promises extraordinary advantages for the cheap manufacture of textile fabrics. Where in the wide world can a Congress of Agriculture do more good than in this extended republic? Are we to remain forever the mere hewers of wood and drawers of water for ambitious politicians, who rarely serve any other interest but their own pockets? More than half a century ago the great and good Washington urged Congress to establish a National Board of Agriculture; and from his administration to the present, the friends of improvement have never ceased to advocate the claims of rural industry and science to the fostering care of government. But it is a foolish waste of time and of energies, to go to a political Congress for any assistance whatever; we must create an Industrial Congress by the union of existing societies, to look after the agricultural and mechanical interests of the Empire. Let such as worship at the shrine of Politics, have both the alter and its divinity all to themselves. There is truly something higher, something nobler, and infinitely better, than the common spirit of politics; and the time approaches when other honors than those won by the slaughter of our fellow beings, or as a skillful political gladiator, will be esteemed by cultivated, christian people. To hasten the advent of such an era by all the humanizing influences that can be brought to bear against the ignorance, the prejudices, and the intense selfishness of semi-savage man, is an object for which all hopeful persons will ever labor.

What is now most needed, is a concert of action among those that already believe in agricultural societies, books, and schools. If we can devise some plan by which all our efforts may be brought to one focus, it will constitute a radiating point from which the light of science and experience may be constantly diffused, until the whole Union is fairly illuminated. It has been calculated that at least 5000 American citizens will visit London, to witness the royal show in Hyde Park, and at an average expense of $600 to each. At this estimate, which is probably much below the truth, we have paid $3,000,000 to foster a scheme gotten up to promote the manufacturing interests of our rivals and competitors in Europe. A national fair in our own country, designed to bring the producers and consumers of all the States together for mutual instruction and social intercourse, would be invaluable; and a national Society or Congress could easily accomplish such an undertaking. Between the Atlantic and the Pacific we have a continent larger than Europe, and instead of allowing its cream to go to fatten the enemies of our institutions, who sneer at the "prairie ground occupied by cousin Jonathan" in the Crystal Palace, we ought to husband all our resources to feed and clothe the ever increasing millions that the Old World will cast upon our shores during the next two centuries. In the battle of life, they will come whether we will or no. The Atlantic ocean is crossed in a week, and not only Ireland and England are annexed on the east, but China, with its countless myriads, is fairly attached to the United States on the west, by the wonderful power of steam. The Chinese are already counted by hundreds and thousands in California; and every possible inducement is presented for them to come in millions, to people the New World. An Agricultural Congress is needed all the more by reason of this double influx of foreigners, to keep the good ship of state safe, and ever sailing in the right direction. All the commercial nations of Europe have made war against the soil of North America since its first colonization, and unless some means can be provided to check the destruction of our cotton, tobacco, wheat, and corn lands, fifty years will suffice to desolate all east of the Mississippi river. The amount of fertilizing elements consumed in forming a bag of cotton, a hogshead of tobacco, and a barrel of flour, is too well understood for any one to contend that the soil loses nothing in the operation. How best to replenish the earth from which crops have been taken, is the point to be investigated with the utmost care. We have area enough to feed and clothe half the present population of the globe, but if all the raw material for making grain, grass, wool, flax, hemp, and cotton, is removed from all clay and sand to the depth of two feet, how much better than a dessert will be our old, impoverished, deserted fields? That there is now enough of the elements of fertility in American soil, is the very reason why we are so anxious to see these elements every where husbanded with the greatest skill and success. To wait till all the things near the surface of the earth which can by any possibility form crops, are consumed and wasted, before we begin to save potash, soda, magnesia, phosphorus, and ammonia, indicates a degree of folly greater than our patience can bear without reproof. As no inconsiderable share of the fruits of the earth are carried to cities and villages for consumption, it is in these that the greatest waste takes place. If a reform in this respect could be effected by deodorizing and drying all fecal matters, to be conveyed back to the soil whence they were extracted, cities would be much healthier and purer, and millions of acres saved from deterioration. All existing agricultural societies should take action on this subject, and seek the co-operation of city governments. To be useful, agricultural associations must have an eye constantly on public opinion, to bring it up to the full appreciation of all the wants of the most economical and self-sustaining agriculture. At present, this country witnesses very little of this kind of tillage and husbandry. Neither the denizens of cities, who throw away the best of fertilizers by the thousand tons, nor the cultivators of poor lands in the interior, seem to care a straw how much injury they together inflict on arated fields. How rare it is that one meets with a man in town or country, who has fully studied the inferences to be drawn from the facts that nature never tills the land to produce her harvests, and that of all the races of animals that subsist on its products, man alone impoverishes it. In nature's broad domains, neither beast, nor bird, nor insect, deteriorates the virgin soil; but when semi-civilized man comes with his axe, his plow, his harrow, his hoe, and above all, his insatiable avarice, then woe to the native forest, woe to the fertile prairie, and woe to every element of the earth's productiveness which can be coined into the almighty dollar. Not that he wants to eat the dollar, to wear the dollar, or that it will not be as safe in the virgin earth as in the vault of a bank—that is not his idea; he wants to show his neighbors and friends that he can beat them all in digging gold out of the soil with the plow! Strange ambition, when the chances are ten to one that the gold will be spent, perhaps foolishly, and the real productiveness of the land greatly impaired just at the time when, from an increase of mouths to be fed and backs to be clad, it ought to yield double harvests. Instead of wasting the elements of fertility, we ought to be accumulating them by every means in our power. Believing a national Congress of Agriculture not unworthy of public consideration as one means of increasing and diffusing rural knowledge, we have ventured to recommend it. This republic being much larger in territory than France, 600 delegates are too many to sit as a central deliberative body. As many as there are represetatives in the lower house of Congress would be all sufficient; and perhaps two from a State, like the Senate, would be still better. We should rejoice to see a meeting of delegates from all the State Agricultural Societies in the Union, to promote the glorious cause; such a body of sound practical men, fairly representing the landed interest of all the States, would command the respect of all classes, and might do more for the advancement of agriculture in one year than Government now does in ten. That a national organization of some kind will be effected before many years, we have no doubt; the leaven is already at work, and in time the whole lump will experience its influence.

SALT AS A FERTILIZER, AND FOR STOCK.

At the request of **Baron Mertens**, Belgian Minister at the court of St. James, the council of the Royal Agricultural Society made the properties of common salt the subject of discussion before one of the weekly meetings of said Council in which Professor **Way** and **Simonds**, and others participated. All the speakers concurred in regarding salt as an element of fertility in the production of wheat, turnips, carrots and other crops; but Prof. **Way** doubted its importance as a food of plants. He said that when an ordinary soil was stirred in a weak solution of salt, the quantity of lime set free (dissolved) "was immeasurably greater than before the salt was added to the water." The lime he supposes before existed as an insoluble silicate, which by some chemical action of salt on the silicate named, and not as yet studied or known, a soluble chloride of lime is formed and a soluble silicate of soda. This reaction would enable common salt to furnish, indirectly, silica to the stems of wheat and other cereals, making a bright glassy straw. It would also yield lime in combination with the chlorine derived from the salt. Mr. **Mechi** had used 150 tons of salt on 170 acres of land during a five year's occupation. He found it essentially necessary for cattle and horses, when fed on wheat straw cut into chaff with bean meal. If salt were not given, their coats appeared rough and unhealthy; but with salt they were sleek and healthy. His pigs and sheep also had salt. Horses and cattle received two ounces daily, yearling calves one ounce. Without being able give the scientific reason, salt gave strength and brightness to the wheat straw, and prevented its lodging. He applied it at the rate of 3 cwt. per acre, mixed with the same weight of guano. He also used a large quantity under the animals, to fix the ammonia in their manure, which it did far more effectually than gypsum. He had known of great advantage resulting from mixing it in the dunghill. It was very beneficial to mangold wurtzel. It certainly, with all deference to Mr. **Way**, appeared to render the land more wet and adhesive. He thought it would not be so beneficial on undrained heavy lands. Early on a hot summer's morning he had observed the grains of salt formed a wet spot, as though they had attracted moisture from the dews.—Professor **Way** explained that common salt might be a better fixer of ammonia than gypsum, on account of its greater solubility. Salt, from any deliquescence it occasioned, might affect land in regard to color and resistance to the action of frost; but moisture was not the simple cause of the good effects of salt. Mr. **Dyer** instanced the deliquescent effect of salt in bacon-salting rooms, where the pavement was constantly damp. He had even known milk spilt on deal boards years ago, which now in damp weather always attracted moisture where the milk had been originally absorbed. Mr. **Fisher Hobbs** referred to the power of the fishery salt to fix ammonia, and used it frequently with guano with a view to that object. **Baron Mertens** expressed to the Council his thanks for the kind manner in which they had acceded to his request, on the part of the Belgian Government, that this subject should receive the attention and give rise to practical discussion. He would only further trespass on their time by inquiring whether any experiments had been made to ascertain the increase in the weight of milch cows, and of the milk they yielded, in conesquence of the use of salt as part of their food? The Rev. A. **Huxtable**, having a dairy of forty milch cows, had found it difficult to make experiments on that express point; but **Boussingault** had last year given an account of experiments similar in their object to those which were now the subject of **Baron Mertens'** inquiry. On motion of Col. **Challoner**, seconded by Lord **Bridport**, the thanks of the Council were given to Prof. **Way** and Prof. **Simonds** for the favor of the statements they had on that occasion made to the members, on a subject interesting and important in itself, but dependent on various circumstances of condition, and a clear elucidation of scientific principles, for its correct comprehension and practical application. Mr. **Raymond Barker** expressed a hope that the learned Professors would kindly consent to deliver these short introductory lectures more frequently to the members at the weekly sittings of the council; a request to which Prof. **Way** and **Simonds** expressed their willing assent.

Editorial Correspondence.

P. BARRY'S LETTERS FROM EUROPE AND THE WORLD'S FAIR.

THE PASSAGE.

Steamship Arctic, June 2, 1851.

Friend Vick:—We expect a couple of days more will carry us into port, and in anticipation of this, I avail myself of one of the most charming days I have ever enjoyed at sea, to give you a few facts and incidents concerning our ship, voyage, company, &c., intended especially for those who have felt interest enough in my fate to bestow a conjecture now and then on "what sort of a time I have had."

You know that we sailed on a most delightful day, just such as one might wish for, who was leaving home, wife, children, and friends, to cross a wide and dangerous sea. There is a sadness creeps over one on looking back upon the fading outlines of the land that contains all that he really loves on earth, and it takes a bright day and cheerful faces around, to keep the heart from sinking into absolute misery. That first day and the second were fine, calm, clear and beautiful, and there was nothing but health, hope, and happiness to be seen in every face. Tuesday was, however, a little rough and then———. The tables that before were crowded were now in greater part deserted. The cheerful notes of music and laughter that before were rising from every part of the ship changed into melancholy sighs and groans. *Sea sickness* had fairly taken hold of about two-thirds the passengers, and we had a changed time of it sure enough. From that time many have not been on deck at all, but the greater number have recovered, and the tables are pretty well occupied again.

I must say a word or two about our passengers. They are in number 140, and present an assortment as great as one would suppose it possible to obtain even by special effort. We have persons from nearly every state in the Union, from Mexico, South America, California, the Islands of Cuba and Jamaica and almost every where. We hear the English, French, Spanish, German and Italian languages spoken around us at the same time.

There is a gentleman on board from *New Granada*, who with his wife and family travelled 18 days over the mountains, *carried on the backs of Indians.*—When he reached New York he considered himself at home, as it were, although his destination is the interior of Germany. Several Germans who had spent many years in the interior of Mexico, married wives there and made fortunes in trade, are returning to *father land*. They give interesting accounts of their long journies. There is a Spanish gentleman among us from the island of Cuba, (an extensive planter there, owning 800 slaves, and great plantations,) who has a little daughter about 4 years old, quite a prodigy. I have heard her recite long and difficult pieces, in Spanish, French, and English, with such perfect ease, and correct expressive gesture as is seldom seen except in a theatre; besides she is a sweet and beautiful child. Her father is one of the most frightful looking Spaniards I ever saw, and allowed by all to be the ugliest man on board.

We have a large number of Frenchmen on board, among whom is Mons. Cabet, one of the Red Republican community, or Socialists, who was expelled with Louis Blanc, Raspail, and their confederates, after the Revolution. This Mr. Cabet has established a sort of community at *Nauvoo*, (a fit place,) called the "*Icarians*." They live together like the Fourierites, discard religion, and spend the sabbath in a sort of home-made dramatical performances. They number at present 280. He speaks well of their success, and is now on his way to claim some property he was compelled to leave. He is an old white headed man, apparently laboring under a sort of monomania. He gave us a lecture one evening in the cabin, which gave rise to a general and very animated discussion on political economy. Mr. Tupper, the poet philosopher, is also on board, returning from his short visit to America. He seems well pleased with the country and the people. He is a kind hearted, amiable man, and has been a general favorite on board, especially among the ladies, on account of his lively, playful and poetizing disposition. He has written many little sonnets and rhymes on board, some of which (the best) I enclose. The following is his "*Salute at Parting*, to his American Friends."

A SALUTE AT PARTING,

TO MY AMERICAN FRIENDS

Though gratefully and gladly
  I hasten home once more,
Yet not a little sadly
  I leave your happy shore;
For, while I speed to others,
  Far dearer and more near
A hemisphere of brothers
  I leave behind me here!

Your kindly words and faces
  Have greeted me right well
In many pleasant places,
  Yea,—more than I can tell;
And though they seemed so fleeting,
  They might not all depart,
For every friendly greeting
  Was graven on my heart!

Then let my mem'ry rank you
  Among her precious things,
And my affection thank you
  For all your welcomings:
I came a truant ranger,
  Your far-off fields to roam;
But where I went a stranger
  You made me feel at home.

Oh! in this world of trifles,
  Of haste and frigid form,
How often folly stifles
  The feelings fresh and warm;
How seldom can a blessing
  Flow from the hearts own well—
How rare the soul's confessing
  With Kedar forced to dwell!

Then simply, but sincerely,
  In plain, unworldly way,
O, friends remembered dearly,
  Receive my thanks to-day;
And if with pleasant savor
  They reach you o'er the sea,
Think oftentimes with favor
  And kindliness on me!

Steamer Arctic, May 25, 1851. Martin F. Tupper.

I prevailed upon Mr. Tupper to give his autograph, for my own gratification and that of the readers of the Farmer. If Mr. T. should publish an account of his travels in America, I have no doubt he would do us justice, and instead of adding to the general ignorance of America now existing in England, would do much to enlighten his countrymen in regard to American customs and institutions. But here is the autograph.

Martin F. Tupper

It is wonderful how this steam navigation, these 10 and 12 day passages across the ocean, are setting people afloat. More than 100 of our passengers are people who never could have been induced to cross in a sailing vessel requiring 3 or 4 weeks voyage.—Close to my room are two old gentlemen from Tennessee, who inform me that a short time ago neither of them had dreamt of ever seeing Europe, but lately, so much has been said of the ocean steamers and short passages, that they agreed one day to cross and see a little of the old world before they would die. They had been doing business in a small town for 30 years, and had been quite successful, more so (they say) than they deserve. They are bound to travel over the greater part of Europe, and although neither are well fitted by education, knowledge of languages, and other qualities deemed necessary to make traveling agreeable and useful, yet from their happy dispositions and long purses they will "get along."

There is on board a Mr. Kennedy, who is sent out by our government to examine into the various modes of census taking in Europe, with a view, if possible, of making some improvements on our present system, by which our statistics will be more reliable and useful. This is an important subject, and I hope Mr. Kennedy's mission will not be in vain; from what I have seen of him I should say he is well calculated to succeed in collecting information. He informs me too, that $1000 has been placed in his hands to purchase seeds for the Patent Office. I hope this will be well expended. From the samples I have occasionally received of Patent Office seeds, I have been compelled to believe that the selections were not generally made by competent persons. I do not see that Mr. Kennedy has any knowledge upon this subject, and therefore he will be under the necessity of relying upon the advice of European seedsmen. If our government will expend money in seeds, as it does annually, it should like all other matters, be done under the direction of well qualified parties.

So much for our passengers. I must now tell you something of our ship. This "Arctic" is really a noble and beautiful ship, about 300 feet long, and 50 wide, with two cabins one above the other nearly all the length. The upper cabin is furnished and fitted up like the state rooms of a palace, with rich and beautiful carpets, marble tables, luxurious chairs and divans, magnificient mirrors, with such a profusion of carving, gilding, and polishing, as dazzles one's eyes. There are seats in the dining saloon for I suppose 200 persons, and the tables are supplied with every luxury that one could have on land. We have had lettuce every day on table as fresh and crisp as though it had just been brought from the garden; beefsteaks and poultry as fresh almost as if brought from the market every morning.

There are employed on the ship about 130 persons in various capacities, all well paid. There are no less than five or six engineers. She consumes about 60 tons of coal per day—what a huge powerful thing the engine is, and yet without a prodigious power it would be useless. When the sea is running as high as mountains, and the great paddles become completely submerged in the water, the force of the engine is necessarily so great as to make every joint creak and groan, and everything on board quake and quiver like aspen. If I am to go to sea in a frail vessel, which God forbid, let it be a sail and not steam. There is a vast deal of superfluous exenditure in the embellishment and management of these ships in such an elegant and sumptuous manner. It is very well for people who require it, and prefer paying for it, but by and by there must be plainer finish of furniture and living for plain business people, and the cost of travel be much less; but let there be no economy in strength and safety.

Mr. **Tupper** has writen the following which sets off the Arctic poetically:

ARCTIC REMINISCENCES.

A floating palace of luxurious ease
  Mirror'd and cushion'd, sumptuously built
  With precious woods, polished and carved and gilt,
Full of the richest rare appliances .
  That wealth could wish, or curious skill invent,
Body and mind to pamper and to please,—
  Such was our ship:—and, for the way she went,
A magic race across the slumbering seas,
  As if some giant cygnet, black of breast,
But snowy-winged, to catch the welcome breeze,
  Gracefully skimm'd the waters:—for the rest,
    Fair woman, with good natur'd merriment,
  And frank fraternal manhood, did their best
  To make our mem'ries of the Artic blest!

MARTIN F. TUPPER.

Steamer Arctic, on the Banks, May 28, 1851.

This is the fifth voyage the Arctic has made.—The following is the time run each day from my note book; 1st, 251 miles; 2d, 272 do.; 3d, 274 do.; 4th, 281 do.; 5th, 270 do.; 6th, 24[illegible] do.; 7th, 273 do.; 8th, 271 do.; 9th, 306 do.; 10th, 280 do.; 11th, sailing in sight of land, did not note distance. During the 4th, 5th, and 6th days, we had considerable head wind, at least all the wind there was was nearly ahead.—Capt. **Luce** is a most gentlemanly agreable man, and servants on board, could not be more attentive or watchful of people's comforts than they are. I could not wish any one crossing the ocean better fare than they will find with Capt. **Luce**.

A RHYME ON RETURNING.

Hurrah for old England! the happy "Fair Haven"
  We wish'd for by day, and we pray'd for by night,—
Hurrah for dear England! that name ever graven
  On hearts of her children in letters of light;
Hurrah! for we honor, and cherish, and love her,
  And count her the praise and the blessing of earth,—
With no one but God and his angels above her,
  And rich with the best of humanity's worth.

Yes, heartily join, my American brother,
  In echoing back to your home in the west
Our patriot love to this Glorious Mother,
  Whose conquering sons in two worlds are so blest!
Hurrah! as we near her we'll heartily cheer her,—
  America, England, together rejoice!
The better you know her, you'll love her the the dearer,
  Then give her three cheers at the top of your voice!

And, thanks be to God for the homes we are longing
  Soon to behold, and to know that all's well,
With dear loving wives, and the little ones thronging
  To hear of the wonders that travelers tell!
Yea,—thanks from us all; for His bounties and mercies
  Kept us, and help'd us, and blest us alway;
And glad shall we be when remembrance rehearses
  How God hath been with us by night and by day.

Steamer Arctic, June 2, 1851. MARTIN F. TUPPER.

LIVERPOOL, June 5th, 1851.

We arrived and got through the custom house late last evening. I am astonished to find vegetation so backward. The weather has been very cold, the thermometer stood at about 30 deg. when we landed, overcoats and good fires were in demand. Most of the vegetables in market are forced. New potatoes at 6 cents per lb., small insiped cucumbers 12½ cents each, green gooseberries as large as peas 5 cents per quart, forced grapes $1.25 per lb. Rhubarb, asparagus, lettuce, cress, parsley, and all such things, good, abundant, and cheap, about the same price as in our market. I notice in the gardens and pleasure grounds, that lilacs, laburnums and thorns, are the most conspicuous articles in bloom at present, and I suppose it is the same with you. The laburnums seem to be especial favorites here. In almost every place where trees are planted, I observe them loaded with their gay golden tresses, and people of all ages and conditions stop and look at them, and exclaim "how beautiful." The taste for flowers seems to be increasing in England. In a few minutes this morning in the market, I saw upwards of 20 young men buy bunches of geranium flowers. P. B.

FETE AT LONDON HORTICULTURAL GARDENS.

LONDON, June 7, 1851.

MY DEAR SIR:—I was fortunate enough to reach London the afternoon before the great Floral *fete* at the Horticultural Society's Gardens, Chiswick, and never before having had an opportunity of attending one, I very willingly postponed my visit to the *Crystal Palace.*

A brief account of the more prominent and important features of this beautiful floral show may be interesting to those especially who take an interest in horticultural matters.

The time fixed and specified on the cards, for admission of the public generally, was two o'clock, but at half past one, when I arrived, there were thousands of people assembled around the entrance gates, and a mile long of the most fashionable public and private carriages awaiting an opportunity of getting near the gates. Hundreds of police were stationed along in the vicinity to maintain order, keep the passages clear, and give to each carriage its due precedence; and so well did they manage their business, that, in all that immense array of people and carriages, not a single collision occurred, nor a loud or disagreeable word to be heard. By and by the gates were opened. In each one two persons were stationed, one in the outside of the passage and one on the inside. The first took the tickets, tore them in two, kept one half and returned the other, which was handed to the next. This was done so rapidly, that, when I reached the inside of the gate, in about ten minutes after it was opened, the grounds, in every part, acres in extent, seemed swarming with people.

Within the entrance, and at various points through out the grounds, were guide-boards, in different languages, directing visitors to the various departments of the show and of the grounds, so that strangers were at once able to direct their course to that which most interested them, instead of having to wander about in search of it, or make inquiries of those who were probably as ignorant as themselves. The articles were exhibited in long tents, wide enough to contain a stage in the centre for the plants, &c., and a walk on each side for the visitors. There were some five or six tents for the plants, and several for visitors to rest or find shelter in if it rained. Seats were scattered profusely through the grounds, and a large tent was appropriated to refreshments. This was also controlled and managed by the Society—two officers were stationed near the tables to sell tickets—no money was taken at the tables, and each ticket specified what it was to purchase; so that everything was done without any needless question or explanation, or, indeed, without *any*.

I have seen a great many large gatherings of people on similar occasions, but never one that approached this in excellence of arrangement. There were probably 15,000 people, or more, present, and from beginning to end, not a loud word, an uncivil expression, or a rude vulgar laugh or jest was to be heard. Neither was there anything reserved or unsocial in people's manner, for all were engaged in the tents, examining and discussing with animation the merits of the articles, or, in groups over the grounds, admiring the rare and beautiful trees, and brilliant masses of flowers with which it was studded.

There is, after all, something in the refined and polished manners of the better class of English society that commands our admiration. This 15,000 people were composed principally of what are termed the *aristocracy*. Judging from appearance, (which, in this case, is pretty good evidence,) there were but few working people in the assemblage, and these were the better class of gardeners interested in the show. There was nothing of the flash of dress, or affectation of manner, that in all countries characterise the ignorant upstart. Throughout, in both sexes, there was a richness and chasteness of dress, an absence of glitter, an ease and gracefulness of manner, and a refined, free and intellectual conversation, that, to my mind, constituted the rarest exhibition of *human culture* I have ever before witnessed.

The regulations of the Society and the high prices of admission ($1 50,) exclude the more humble classes, and maintain that *selectness* so remarkable to us, who are unaccustomed to such a state of society. If these exhibitions were quite accessible to all, the Society would not be able to accommodate them, for thousands would come in from idle curiosity to see and be seen. As it is now, those only come who are enthusiastically fond of horticultural pursuits, and anxious to promote their interests. It is some satisfaction for a gardener to present to such an audience the result of his labors, for they are appreciated.

From what I have said, I would not wish it to be inferred that I entertain the slightest partiality for aristocratic distinction. I intend simply to express my admiration of personal and mental graces and accomplishments, without regard to class or caste. In the English aristocracy there are as ignorant, dissipated, and vulgar specimens to be found, as are elsewhere in the world. These are to be seen at the theatres, horse-races, gaming-houses, and similar retreats; but I do not believe they frequent *floral fetes*; these entertainments are too simple, moral, and refined, not boisterous or excitable enough. They have a parallel in our mixed society—those who would prefer the exhibition of a negro dance or melody, or a low theatre comedy, to any exhibition of earth's most beautiful productions. What a difference in the personal appearance of these English people and Americans of the same class. With scarcely a solitary exception, they are stout, well built, fleshy, florid people. A lean, bony subject like your humble servant, is quite a rarity, and when one is seen, he is suspected of being an exotic. The ladies, in this respect, contrast very strongly with Americans. They are almost without an exception, robust, fleshy, with much color in the face, and as fresh and fair at forty as American ladies at twenty-five or thirty. But, as a general thing, they are not so handsome, their features are more masculine and less calculated to awaken passionate sentiments of regard in the opposite sex. But their beauty, such as it is, is more permanent.

I have, perhaps, dwelt too long upon the preliminary matters, but they are points that left an impression on my mind, and I write to give you my impressions, right or wrong. I now proceed to notice briefly the articles exhibited.

FRUITS.—No kind of fruit has yet ripened here in the open air, and consequently all that were exhibited were forced under glass. *Strawberries*, *Grapes*, *Peaches*, *Pine Apples* and *Melons*, a very few of each, constituted the whole fruit department. The strawberries were almost exclusively of the *Keen's Seedling* and *British Queen*, both of which are esteemed for forcing. The Queen were the largest specimens I have ever seen. Peaches were of *Royal George* and *Early Violet* (violet hative). The Royal George were of monstrous size, nearly double the dimensions it attains under our orchard culture. Pine Apples were of the Providence and Queen, principally, some of the former exceeding six pounds in weight.

The Grapes were chiefly *Black Hamburg* and *Muscadine*, very good, but not remarkable specimens, —the bunches, generally, were not over medium size, but they were well colored and perfect. Of melons there were but few. I observed that meagre as was the show of fruits, it yet attracted more attention than any other part. From the opening, until late in the evening, it was surrounded by such a crowd of persons that it was impossible to see the tables, and I had to wait till many had left before I could get near enough to see them satisfactorily. The *great* feature of the show was the flowering pot plants. This was wonderfully rich, and afforded a grand illustration of the enterprise of English amateurs and nurserymen, as well as of the patience, perseverence, and skill of the gardeners. Most of the specimens were of large size, trained and pruned into perfectly regular forms and covered densely with blossoms.

Heaths figured prominently. Many were so large that one person could not lift them, trained in pyramids or globes, and so covered with flowers that scarce a leaf could be seen. They looked more artificial than natural. I noted two yellow sorts that struck me, in several collections, as being very fine—*Depressa* and *Cavendishii*, *Azaleas* (Chinese) were largely shown, and like the Heaths, the specimens were superb, perfect masses of bloom. I noted a very beautiful striped (red and white) one, *Gledstansii*, in many collections. *Decora*, a crimson variety; *Variegata*, rose and pink; *Minerva*, a scarlet crimson; and *Optima*, scarlet; were all particularly fine.

Of *Orchids*, there was a magnificient show, decidedly the most interesting part of the exhibition to collectors of rare plants. What curious and georgeous plants these are. I noted extraordinary specimens of *Cattleyas*, *Stanhopeas*, *Oncidiums*, *Dendrobiums*, *Saccolobiums*, and *Nepenthes;* the last named is the curious pitcher plant. There were many species shown, and among them a beautiful blood-red one, (Sanguinea.) In this department our *Sarracenia*, or side saddle, figured.

Of *Geraniums* there was a fair display, by GAINES, of Battersea; HENDERSON, of St. John's wood; and some others. I noted as the most striking varieties, *Nepaulese Prince*, *Forget me not*, *Conspicua*, *Painted Lady*, *Star*, and *Rosamond*, considerable attention seems to be directed, to the *fancy* sorts, and one or two good collections were presented. *Anette*, *Alboni*, *Prima Donna*, *Mrs. Loudon*, *Queen Victoria*, and *Princesse Marie Gallitzin*, are half a dozen that struck me as the best. The cape species of geranium are beginning to attract attention, and several very brilliant ones were shown. They are showy and distinct.

Roses were scarce. The season for out door or open ground exhibitions of them is at hand, and that probably prevented their exhibition in pots at this time. LANE & SONS, well known growers, had the principal collection. I noticed some superb specimens of *Souvenir de la Malmaison*, the flowers of monstrous size, the plants were large and very vigorous. Really, after all, it is hard to equal this famous rose. Two poor specimens of *Geant des Batailles* were shown; but poor as they were, they attracted attention by their peculiar richness and brilliancy of color. *Madam Plantier* was shown fine, and a charming white rose it is. So is *Miss Glegg*, and *Amie Vibert*, among noisettes. *Clara Wendel* and *Ne plus ultra* were among them too, and are both first rate yellows. Among teas, *Devoniensis*, *Pauline Plantier*, and *Viscomte des Cazes*, all yellow, were shown, and they are all good. In form the first is the best, and the last the deepest colored, like Chromatella; and by the way, this was not shown. A few poor specimens of common sorts of Hybrid Perpetual, and Hybrid Bourbons, and Chinas, were shown, but unworthy of notice.

Verbenas, none worth naming. *Petunias*, a few *very large*, but of dull, poor colors—our seedlings at home much better.

Calceolarias, (seedlings,) a superb show. The florists here are all raising finely spotted sorts. The flowers are very large; the ground color, from a pale straw to deep yellow, with spots of all shades of red, brown, and purple. Large plants like these, with 20 or 30 flower stems, each bearing many flowers, and all tied up and spread out in great regularity, are very pretty indeed, and made a bright spot on the stage.

Pansies and *Daisies* I expected to see *wonderfully* fine, but found them decidedly poor. So of pinks. In fact, nothing among them all was worth naming; but *Ranunculus* were fine. Among miscellaneous articles, I must mention *Pimelias*. Some of the specimens were of enormous size, and perfect masses of bloom. *P. Spectabilis*, a white one, did not show a leaf, its form was a globe, and it looked like a great ball of snow. Of *Aphlexis*, or *Helychrysus*, there were a large number of beautiful specimens, the most showy plants exhibited. The flowers are of various shades of purple, and resemble the mesembryanthemums. Of *Gardenia Fortuni* there were several noble plants, the leaves very large and glossy, and the flowers as large as Camellia, and not unlike a double white. *Hoya alba*, or white wax plant, is a beautiful thing. A great pillar of *Stephanotus florabandus* was shown, very attractive. Besides these, I might mention the *Ixora Coccinea*, with its immense clusters of orange and scarlet flowers; *Clerodendron Fallox*, and other species, with great leaves and scarlet flowers; *Sasticia Carnosa Lechenaultias*, and many other things, remarkable for the size and perfection of the specimens and the showy character of the plants themselves.

Lengthy as is this notice, I cannot close it without mentioning the grand display of "American plants," Rhododendrons and Azaleas, by Mr. WATERER, of Surry. This occupied a separate corner of the garden. The specimens were planted out in regular flower garden style, arranged both in regard to size and color of blossom, with the best taste. They covered from one-fourth to half an acre, and surpassed in brilliancy anything of the kind I have seen before. There were among the collection some large Rhododendrons, worth $120 each. Among the Rhododendrons, I noted as particularly striking, *atrosanguinea*, deep blood red; *Candidum*, pale blush; *Oenatum*, deep rose; *Coelestinum*, pale lilac. The *Azaleas* were tastefully mingled with the Rhododendrons, and by the brilliant yellow, orange, and scarlet, produced a fine effect. I find I must defer further notices of this kind, as well as notes made of interesting objects in the Society's garden, till another time. P. B.

THE GREAT EXHIBITION.

LONDON, June 9, 1851.

DEAR SIR:—Were it not that I shall have no other opportunity to write before the sailing of the steamer on Wednesday next, I would not yet attempt to say anything in regard to the exhibition, for I have only spent one day in it, and I found that not enough to study the geography of the building and its arrangement. To go into an examination of its contents, and a comparison of them, will involve no little time and labor. I can say this much now, that, extravagant as my ideas were respecting the vastness of this structure, and the almost infinite variety of its c tents, I find when I approach it, enter it, and move about it, that all my conceptions were too small. Only think of a building 1850 feet in length and 450 in width, composed of light and airy looking iron posts and rafters, and covered with glass, admitting and often containing 40,000 persons, and affording a front view along the different avenues of ten miles long, for the display of goods. It is estimated that 15,000 persons exhibit goods, and that one half of these are British. 41,000 thousand persons had entered to-day at 1 o'clock. There are four places of entrance, and at each of these a policeman is stationed to count the visitors as they enter. Along the sides at various points are places of exit, intended to relieve the main entrances and save people the trouble of long journeys. The ground plan of the building is that of a parallelogram, 1850 by 450 feet. Through the center of this, crosswise, is a broad avenue, called the *transept*, 120 feet wide; and through the center lengthwise, runs another avenue, the *nave*, about 80 feet wide. These are the two great avenues of the building. On each side of the nave are secondary avenues, two on each side. The spaces allotted to each nation generally run from the nave to the side, and in many cases across the whole building, and in front the name of the nation is suspended in white letters on red cloth. The galleries are arranged in the same manner, so that as you pass along these two great avenues, you can visit nearly all the nations of the world that can be said to be civilized. For instance, in the transept, or main cross avenue, in the south end of which is the main avenue, we see on the right, Tunis, China, Persia, Egypt, and Turkey; and on the left, India, Malta, Ceylon, &c. Enter the nave, or main avenue running lengthwise, and you find the whole west end occupied by Great Britain and her colonies, and on the east, Greece, Spain and Portugal, Italy, France, Belgium, Austria, the *Zollverein* or German States that united in a common system of duties, Russia, and at the extremity, the United States.

Now I must describe the transept to you, for I think, as far as appearances go, it is the glory of the whole arrangement. I remarked before that this crosses the building, and it is the part covered by that semicircular roof which you see in the picture, standing up so conspicuously above all the rest.—The main entrance is on the south end of this, and as you enter, you pass on each side a group of small buildings or apartments, which are used by the executive officers. Here stand two of the noble old elms of the park. You pass in the door, and there you involuntarily stop, and gaze down that great avenue, filled with statuary, magnificent fountains of various designs with powerful streams of water gushing from them. Here and there are some rare and beautiful palms and other trees, vases, &c., and at the extremity, two more of those noble elms. The roof, too, is so lofty, that one considers himself in the open air, and the whole scene is like some magnificent garden. On either side are the brilliant exhibitions of eastern nations. But I ought to give you in detail the arrangement of this transept.

The first thing you meet when you enter, is a fine specimen of a park gate of bronzed and gilded iron. It is appropriately placed here for exhibition; made in London by Coltam & Hallen. Behind this stand in two fine cast iron vases, two beautiful specimens of the Norfolk Island Pine. Then in the center stands a group of rare trees and plants, comprising fine specimens of the Japan Cedar, New Zealand Spruce, and two Sweet Bays in pyramidal form—admirable things. These are mixed with baskets and vases of smaller, flowering plants, and make a charming group. Then comes a bronze statue of her majesty on horseback, as large as life; behind that a letter post, in form of a bronzed cylinder, for the use of the building, exhibitors, &c. Then we come to an object that occupies the very center of the building—a crystal fountain (glass) 27 feet high, with a broad sheet of water pouring from its top, and a broad, bubbling fountain at its base. This is really a beautiful thing, and is the first that catches the eye upon entering the building; but the glass is dull compared to the brilliancy of cut glass fabrics.—Standing at this fountain, you have a dazzling view of the two great avenues, north and south, east and west; and as you stand, with the gushing of the fountains, the tones of the great organ, and the hum and noise of 50,000 people falling on your ear, you will for a moment imagine yourself in dream land. Presently, however, you will hear the gruff voice of a policeman saying, "Pass on, gentlemen; pass on;" for people are very apt to tarry too long at certain points. I saw a good illustration of this in the transept. Among the statuary was "The Dying Shipwrecked Boy." He is represented as expiring with the prayer on his lips, "Almighty Father, protect my poor widowed mother." This is a touching piece, and so awakens the sympathies, that people linger around it until they are forced away. North of the glass fountain we proceed, and meet a model of a ship of war of 116 guns. Then a hydraulic ram, working away steadily. Then we come to a large metal fountain, manufactured by Freeman, Roe, & Hemson, 70 Strand; it is throwing a great jet of water, and is surrounded with many rare and fine palm trees, &c. Close to it sits an old lady in a pretty little Chinese-looking tent, making and selling boquets. Here stand the two famous imprisoned elms, doing well in their confinement. Then a model of a conservatory, by Weeks & Co., of Chelsea. Next, a case of tropical birds and plants, illustrating a tropical scene. Again we come to a fountain of cast iron, bronzed, and surrounded by pretty groups of trees and plants, and just behind it a stand of plants by David Ferguson, who says in a card, "stands alone in Europe offering first rate geraniums, heliotropes, and other bedding plants, at a penny apiece." Here the remainder of the avenue seems to be cut off by another sample of bronzed iron park gates, made in Liverpool. North of these gates the space is mostly devoted to the refreshment court and small exhibitions of plants. Lane & Sons have here a fine collection of Rhododendrons and Azaleas; and Paul, of Chestnent, a nice collection of rare evergreens, comprising a fine specimen of the elegant funeral cypress.

The refreshment business is well managed. It was let to the highest bidder, at 5,000 and some odd pounds, or upwards of $26,000. He will clear a fortune, too, at that. No spirituous liquors are permitted, but to-day I saw the pocket powder-horn pulled out not unfrequently.

In mentioning the articles that fill up the grand aisle, I have said nothing of the thirty or forty pieces of sculpture and plastic work that are arranged along each side. I can not go into detail—some are very beautiful in design and execution, and others inferior in both. They are mostly by British artists, and are not to be compared with the continental productions. As I said before, I spent my day in studying the outlines of the exhibition, and therefore can not enter into detailed account of the merits of anything. I devoted a couple of hours to our own show. It is looked upon with less interest generally, than most others, for several reasons. One is, it occupies the remotest end of the building from the main entrance, and before reaching it you have passed through the most brilliant continental departments. When our articles are reached, one feels wearied. Then, they are plain, unattractive to the merely curious, and people say, "Pshaw! let us go. There is nothing here to look at." Those, however, who go below the surface, find much to admire and examine, and reflect upon. Our India rubber manufactures, life boats, carpets, maps, whips, carriage springs, clothing, buckets, bottles, &c., are all interesting and creditable. Our daguerreotypes have no rivals. We have some elegant carriages, edge tools, agricultural implements, shoes and other clothing, dentistry, &c., that all give evidence of skill.

I see our Genesee and Harmon's flour and Oswego corn starch and Hecker's farina here, and a collection of very important minerals, plumbago, magnesia, &c. Pierson's great piano attracts great attention among musical connoisseurs, and is certainly a remarkable instrument. Some new bedsteads, the different parts of which are united without screw or bolt—an ingenious and attractive affair.

One cannot help pausing occasionally, as he passes around, to reflect upon the vast influence this wonderful affair is destined to exert upon human pursuits. Here are nations brought together, to compare products from every part of the globe, where men are in a civilized state. Each finds that the other is far in advance of them in some particular respect. England, for instance, in regard to machinery—that on which the subsistence and employments of her people depend—is in advance of all the rest of the world. In sculpture, statuary, painting, glass staining, and all the fine departments of design and execution, she is greatly behind her neighbors on the continent. Going through the exhibition, we see and feel this at every step, and the conclusion one comes to is, that this show is destined to be a great era in human handiwork.

I hear traders on all sides complain of dull trade, and attribute it to the exhibition. Why, I cannot say. The Londoners are disappointed. Thousands fled from their houses to the country, so that they might rent them, but they remain tenantless. All sorts of shows and contrivances assembled here to catch the floating shillings, but, as a daily paper has said, the great exhibition has swallowed them all. There is, however, a vast deal of money spent here, and nothing but downright greediness can induce a grumble.

I will write again by next steamer. P. B.

London, June 13th, 1851.

Dear Sir.—The steamer sails to-morrow, and I may as well give you a few items concerning the "Great Exhibition," as it is now aptly and universally styled. It is now 38 days open, and strange to say, the interest is no less general or intense than it was in the beginning. Steadily, rain or shine, 40 to 60,000 people enter each day, and nearly all of them spend their day there. It is not a place to enter and stroll about until you are weary and then leave. Thousands of people bring their refreshments from home, and along about two or three o'clock, and indeed at all subsequent hours till six o'clock in the evening, groups of a half a dozen or a dozen or twenty, as well as solitary individuals, are to be found plundering their well stored baskets and bottles; whilst others are clustering about the eating places "by authority." When you have spent one day, you feel that you must spend another, and that shows another still to be indispensible; and so on till a week of days are spent in it, and after all but a small portion examined. The field to be gone over by one who wishes to come away well informed, is immense.

I have so far, with trifling exceptions, confined my attention to agricultural implements, and machinery. The display of English articles of this sort cover several acres in extent, and is no doubt without a single exception the largest and best that has ever been brought together in the world. There is scarcely an article of any conceivable use to the agriculturist, that is not presented in some form or other, or in a multitude of forms, and I feel certain that I cannot come away with a satisfactory notion of the merits short of a week's examination.

Draining and drain-tile making machinery occupy a very prominent position, and there is actually an invention of this kind offered by which drains are made, and the the tiles placed by one operation, and that without breaking the surface of the ground.—Horse power is applied by means of a capstan or windlass. In plows, harrows, cultivators, rollers, clod crushers, &c., &c., there is an endless variety, and all made of iron, and in the most elaborate manner. There are also a great variety of portable steam engines, presented for farm purposes, and I am informed they are coming into very general use on extensive farms, for various purposes, cutting hay, chaff, roots, &c., churning, pumping, steaming food for animals, &c. I have seen none that cost less than $500, but it appears to me that small farm engines may be produced for much less. English implements and machinery are all ponderous, elaborate, and costly, and one great reason why our plows, and in fact all our implements are laughed at by the farmers and ridiculed every day by the press, is that they are light, simple and cheap. They call them the make shifts of a new country. An English iron plow of the best kind is a beautiful implement, and in clear smooth ground, it will no doubt make finer work. Its greater length is one reason, this increases its stability, scarcely any of them are less than 15 feet in length, and some more. One of them will weigh more than 3 or 4 American plows, and cost at least 3 times as much. I have observed horse hoes (cultivators) that weigh 1000 lbs., and very small looking ones 8 to 900 lbs. I have seen some elegant models of carts, and have made note of their good points that I may carry them into practice at home, but the greater number of their carts are frightfully clumsy. There are many presented here as models that would weigh as much as our cart, load and all. And there are cart wheels shown here that cost $50 a pair, and are so heavy that machinery would be necessary to handle or use them. Throughout, this heaviness is obvious. Yesterday there were some 800 farm laborers in the exhibition from a certain district in the country, and their shoes which they wore had great wrought iron nails enough in each pair to shoe my pony. Their frocks or overalls are stitched and counterstitched, until more thread and labor are expended upon them than would buy a much more becoming garment. It is so in all things — there is scarcely an effort made to simplify and cheapen implements of labor. They are improved, but at the same time rendered costly, complicated and almost unmanageable. Practical men begin to feel this and to speak it out, but the great fancy farmers of England glory, of course, in these ponderous, glittering, "scientific" things. The districts around London, beyond the gardens, are noted for poor farming. I saw there four horses attached to a plow, placed one before the other, with a man to drive and one to hold the plow, and the whole cavalcade managed to turn an eight inch furrow at the rate of two miles an hour; but such a sight as this would not be seen in Northumberland or Durham; there one can see the best farming in the world.

I have made minute and careful notes, which I shall bring forward hereafter. There are about English implements many points that we can adopt with advantage, and modify to suit our purposes. Our implement makers might have learned much here. I have had frequent occasions to regret that our implements and many of our other articles were not properly shown and explained to visitors. In every department of almost every other nation you cannot look at an article without having an attendant step forward and politely offer you all necessary information If each collection of implements had been accompanied by a competent person to explain and show their merits and to defend them from the attacks and misrepresentations of the English papers, they would have stood now in a different position.

The ridiculous paragraph which appeared in the New York Herald, speaking of a probable insurrection in London during the exhibition, is, it is believed here, the great cause of the hostility of the newspapers, and especially of the Times, to the American department. Not a single syllable has been said disparagingly of any other nation's articles or arrangements.

I must close this without referring to many matters that I intended to speak of. P. B.

London, June 19, 1851.

In regard to products of the soil and implements for culture, the objects that are most interesting to me, I am greatly disappointed in the great show. I apprehended that these departments would be overlooked amidst the more attractive arts, but it is not so. The display of these articles is grand. In implements and machinery applied to agriculture, there never was before so complete and comprehensive a display; and from nearly every nation, there are samples of field products. I regret to see such a scanty show in this way from our own country, so surpassingly rich. Our seedsmen, gardeners, and nurserymen, our extensive grain growers in different parts of the country, our timber dealers, and every class connected with the natural or cultivated products of the soil, should all have been called upon to contribute, and some assistance should have been given in necessary cases. We might in this way, if in no other, have made a display that would have elicited the admiration of the world.

Canada has in this way done herself great credit and attracted much attention and admiration.

Opposite her compartment we see in the nave or broad aisle, among the statuary and other grand and notable objects, a huge trophy of *woods*, the natural products of the Canadian forests, all dressed on one side, showing the finish each is susceptible of. The beautiful black walnut, curled maple, birch, &c., attracted much attention. Ship timbers were also included. When we enter the compartment, we are struck with long ranges of barrels of wheat, flour, beans, peas, Timothy seed, buckwheat flour, a very complete collection of garden seeds, all fine samples, hemp and hemp seed, flax seed, clover seed, maple sugar and double refined sugar, hops, starch, biscuit and crackers, leather of different sorts, furs and skins dressed; of the last there were three finely arranged, effective groups, that threw a sort of character over the collection. Then there was honey, pork, beef, lard, tobacco and snuff; a barrel of very nice vinegar from beechwood, by Messrs. Gillespie & Co., of Montreal; beef tongue, smoked hams, and Bologna sausages, besides a multitude of other articles pertaining to food.

In manufactured articles, they made a good display. I noted good plows, some elegant sleighs, and robes of fox, bear, and wolf skins, harness, cordage, hay and manure forks, scythe snaths, a case of good table and pocket cutlery, black walnut and other furniture, a beautiful set of blackwalnut chairs, "to be presented to the Queen, on behalf of the ladies of Montreal," woolen cloths, samples of Glaussen's patent flax cotton, fine chopping axes from Dundas and Toronto, jewelry and dentistry, fire engines, &c. Then they had a fine show of their mineral wealth; large pieces of copper ore from Lakes Huron and Superior; silver, gold and iron ore; blacklead, granite, marble and slate, gypsum, shell marl and sandstone, millstone rock, soapstone, sand for glass making, jasper and agate from Lake Superior, and a multitude of other things.

Geo. H. Cheney, of Toronto, sent a good sample of a cooking stove with copper furniture; also a parlor stove, and a case of types. I have enumerated these articles, as well to show what Canada is producing, as to show how varied her exhibition here; and I have not mentioned half the articles. All were well arranged, too, and made a good impression.

Had we been so industrious or ambitious, what a show we could have made. I have been strongly impressed with the natural sources of wealth and greatness there exists in the Canadian soil. These evidences come home at once to the mind, and many and many an Englishman and Frenchman and German and Russian has left the Canadian department with enlarged ideas of both her natural resources and advancement in the arts.

I have really felt proud of our neighbors, for we are so united by proximity and business interests, that I consider them as almost "of us," and I find many good loyal subjects of her Majesty who believe they will be, and that at no very distant day.

It is now approaching two months since the wonderful show was opened to the public, and during all that time a steady stream of visitors has flowed into it, at the rate of 40 to 50 and 60,000 a day. At this moment the interest, instead of cooling down, is actually becoming more intense, even among the residents of the city. The number of visitors increase daily, until they now reach about 70,000. Only think of that. And then think of this huge glass building, containing samples of all departments of British industry, and that of forty other nations besides — indeed, nearly the whole civilized or semi-civilized world. Here in this building are people of all nations, conversing in all tongues and languages, at the same time. From pole to pole, the world, both in its industry and its inhabitants, is represented, and a collection of men and things brought together, such as no man living ever saw before. The great questions of the day here are, What are to be its results! Will it benefit trade or injure it? &c., &c. On these heads long newspaper articles are written, lectures delivered, and sermons preached, and books written. To me, one result seems inevitable: it will give to the different nations of the world a more intimate knowledge of one another, not only in regard to their industrial, but social relations. My own case is an example that I am at liberty to refer to. Here I have been able to examine the fruits and other vegetable productions, minerals, and manufactures of Russia, Norway, Sweden, Spain, Portugal, China, Egypt, Australia, Algiers, &c., countries in which I have never traveled and probably never shall; and although I may have read of the condition of these pursuits and products, yet what is such information, compared to an actual inspection of the articles themselves. The millions who have visited this palace of industry have all learned something, and the world has received an impetus in its onward progress in the arts. Englishmen are proud of it, and justly too. The idea of such an affair is grand, but to carry it out so perfectly and successfully in all its detail, is grander still; and I can really forgive the daily glorification of the English journals over it. An impression obtained all over England that the United States was unfriendly to the exhibition, and that the Yankees hoped and prayed for its failure. Not a day have I been in the building without hearing, often and often, the expression, "I wonder if the Yankess still predict a failure." This impression created a deep prejudice against our articles, and the "Times" has scarcely failed a day since I have been here, to sneer at and ridicule "our cousins from the United States." It will do us no harm in the end — we can afford to lose a little of our self-conceit; but ridicule is always unpleasant.

The business people of London have experienced some disappointment over it. They expected to empty their stores every week or two, but "business never was more dull." Theatres, and thousands of places of amusement, all of which anticipated fortune-making times, are mourning over an unexpected "beggarly account of empty boxes." The exhibition itself swallows all. The working people have for months back been hoarding up their means, and have not made their ordinary purchases, in order that they might be able to take a holiday and spend a few shillings in the exhibition. This has affected trade very much in the aggregate, no doubt. Visitors to London find enough to engage their attention, without paying. The public buildings are all accessible now. The castles and palaces of the aristocracy are all thrown open, on certain days of the week, to every body. Their magnificent parks and gardens, their great collections of paintings, and everything that long centuries, unbounded wealth, and cultivated taste have assembled together. These throw all petty shows into the shade. The parks of London alone are now-a-days panoramas of extraordinary beauty. The only real luxury I have enjoyed here, has been an occasional stroll in Hyde Park; and here I must say a word about this park, for the benefit of those who have never seen it. Imagine 400 acres of land with a gracefully undulating surface, a lawn like velvet, studded over with trees of all ages and sizes. I saw several six feet in diameter (elms,) and many are only a few years planted. Through it runs the serpentine river, a stream about as wide as the Genesee, but so clear and quiet does it glide around its graceful serpentine curves, that it is a perfect mirror, reflecting the park on its bosom. The grass is green as emerald to its very edge, weeping birches droop their slender boughs over it, and at one place it is spanned by a beautiful bridge. Here are also drives, broad and smooth, kept with more than the neatness of a garden walk, and winding like the river in graceful serpentine curves. Here daily we can see the best blood in England, either of men or horses; with the latter I am especially delighted. In this park, too, are groups of cattle, the finest Durhams in England, and many other breeds. In one place are barracks for the "life guards," and in another a pretty cottage for the keeper. In every part of it people are strolling and lounging; and really, when one gets in a quiet nook, pretty well elevated, and takes a survey of the scene, including the "crystal palace," its glassy roof and thousand flags, it impresses them at once with a feeling both of the sublime and the beautiful.

Hyde Park and the other parks around London! — what a blessing they are to the people of this huge, smoky, foggy, crowded city. Here they can go out and breathe pure air, see the trees, the green grass, herds of cattle, and in fact, the country in miniature. This cultivates a taste and cherishes feelings that can not fail to counteract some of the evil effects of great cities.

While I am speaking of parks, I must not forget the great park at Greenwich. Greenwich is a large and ancient town, five miles from London, on the Thames. The Royal Observatory is here, where it is well known all English astronomical observations are made. There is a great park here, several hundred acres in extent, and though not so beautiful as Hyde Park, is full as well adapted for a promenade and pic-nic resort. A portion of the ground around the observatory is so high as to command a fine view of London and much of the surrounding country, and the Thames, with its active, grimy, floating population, far up and down. In a clear day the prospect is fine, and all around the highest points you will find infirm old sailors (who are closing up their lives here in one of the finest charitable buildings in the world,) with small telescopes through which you can look at distant objects. The trees in this park are very old and of gigantic proportions. They are planted in *avenues* straight from one point to another —cutting the park into triangles. It is these avenues that make it so pleasant a promenade. I was there during a heavy rain, and thousands of others, too, and we all found a complete shelter in the avenues, so broad, dense and interwoven are the masses of foliage of these venerable elms, lindens and chestnuts. There are fine herds of deer in the park, and an extensive rabbit warren. On a fine Sunday afternoon, or during a Greenwich Fair day, (held last week,) 10,000 people may be seen in this park at once. Steamers run on the river, carry passengers from all the bridges every quarter of an hour, and there is also a railroad conveyance every few minutes, for about one shilling your money. I think the influence of these public parks is very evident in the tastes of the people, for there is hardly a house in London, (unless in the lowest sinks, whose occupant never saw a green tree,) but has its little collection of window or parlor plants; thousands are sold daily, and I am quite surprised to see men and women, apparently very, very poor, buy half a dozen pot plants and carry them off to their humble homes. One would suppose that food and clothing would be more necessary.

A great want of the poor here, is cheap newspapers; and this want is attended with the most demoralizing consequences. Working people must get the news of the day, but they cannot afford to pay 10 or 12 cts. for a newspaper. The city, however, like all other cities, everywhere abounds with taverns and dram shops; these take the papers and invite the working people in to read. On all sides you can see a label on the window, "A coffee and smoking room, and the papers taken." This is a tempting notice, and in goes the work-people to drink the "pot of beer," smoke a pipe, and read the paper. This is followed up until home and family are forgotten, and the man is converted into the toper. It is so with tens of thousands, and if the British government would only make a move towards providing every poor man with a daily penny paper, it would revolutionize the social habits of the London poor and respectable working classes.

This reminds me of Mr. MAYHEW and his "London labor and London poor." The "Coster Mongers," or street dealers, of whom he gave such a dismal description, appear to have a sprinkling of self-respect, for they have held an indignation meeting lately, and denounced his statements as slanderous and false.

The London markets are objects of great interest to strangers, but I must speak of them at another time, as they and other matters connected with them will be enough for a long letter. I have met more Americans in the markets of an early morning than in any other place, and all are much interested in examining the quality of the articles and the mode of doing business.

I leave town to-morrow, for the Continent. The rose season is now in perfection in France, and will not open here yet for another week or ten days. I yesterday, for the first time, met my young friend Mr. POMEROY BREWSTER; he had just returned from a ten days' ramble on the Rhine. Mr. and Mrs. BATEHAM, of Ohio, and B. P. JOHNSON, Esq., of Albany, are the only other acquaintances I have seen.

P. B.

PEACH LEAVES vs. SHEEP.

IT may not be generally known, that peach leaves are poisonous and often prove fatal when eaten by animals. A few days since, in Western New York, I witnessed the death of two sheep, caused by eating too freely of peach leaves. The peach is a native of Sicily, (I believe,) and was originally poisonous, but by cultivation has become one of the most delicious of fruits. The leaves however are said to contain prussic acid. Sheep should never be allowed to run in peach orchards. Several cases have occured, in which cattle and sheep have been poisoned, by eating the leaves of the wild cherry. The tame cherry is equally poisonous. It has been said that cherry leaves are free from poison until the leaves have wilted; but cases have been known in which the green leaves have proved poisonous and fatal to animals. In the cases I witnessed, the sheep exhibited vertigo and trembling, and frothed at the mouth, and evidently endured much pain. After several hours had elapsed, a noble lamb belonging to one of the poisoned sheep, came up and called out urgently for his supper. The sick and dying mother raised her head, and turned and looked piteously at her offspring, crying with hunger. Nerved with a spirit of maternal affection, she struggled and gained an upright position, and with much difficulty maintained it and gave nurse to the lamb. This done, she lay down and died instantly, and I presume in peace. Various remedies have been suggested. A writer in the Mass. Ploughman recommends a pint of New England rum, mixed with a pint of molasses, and given to each grown sheep. One-third of this quantity to a sheep. Salt would doubtless be beneficial, as it is useful in cases of poison from the bites of snakes, stings of bees, &c. A gill of sweet oil, or castor oil, or lard, or fresh butter given in a pint of new milk, it is said, will sometimes effect a cure. Most vegetable poisons however are acids, and require alkalies to neutralize them. Ammonia, lye of wood-ashes, and pot and pearl-ashes, are used for this purpose.

One word in reference to the management of stock bucks. It has within a few years been materially changed. Formerly the buck was turned in with a a flock of ewes, and ran with the flock through the tuping season. The objections to this course are, that it proves injurious to the buck, and renders the lambs small and feeble. Experience has shown that when the buck is kept up and *tended*, the above objections are obviated. It has been said that one service is preferable; but the best flock-masters in this section, now agree that a single service is not in all cases sure, and that the buck should be allowed to serve each ewe at least twice during the few weeks of tuping season. When all have been thus served, let the bucks and ewes together for a few days, which will generally render the thing sure, and give as many lambs as there are ewes in the flock. S. B. ROCKWELL.—*Cornwall, Vt., July*, 1851.

A CHAPTER ON WOOL GROWING.

MESSRS. EDITORS:—In growing wool, we certainly want a flock that will give the most valuable fleece for the same keep; and for our Northern States, I have found none equal to the Merino, as they are a very hardy animal. They will do the best on scanty feed of any kind of sheep that I have ever been acquainted with; and their wool being very thick, and filled with oil, they can endure the storm; and their lambs are the strongest and most easily reared of any kind that I have proved—and I have tried about every kind that has ever been cultivated in the United States. The reason why so many think them a tender animal, is, they are not acquainted with the full-bloods, as very many of them which are called pure bred Merino, are not only tinctured with native, but with Saxony blood, and our country is filling up with mongrel sheep that are called full blood Merino. The State of Vermont has learnt that many in this State are very anxious to obtain the pure bred Merino, and they are bringing them to us by droves; but the most of them are grade sheep, and are bought in Vermont from one to two dollars per head, and sold here from five to twenty-five dollars per head. If those who buy of such *peddlers* would require certificates, stating that they were pure bred Merinos, and the particular flocks that they obtained them from, they would act wisely; and certainly if they are full bloods, they will be willing to give such certificates. But those who buy without them, will no doubt find themselves in the back-ground, by and by, when they want to sell to those who wish to improve their flocks, or want to establish a flock of pure bloods, as those who understand what they are about will require certificates of the pedigree, that will satisfy them that they are the *simon pure.*

I will relate a circumstance that took place when I was in Vermont, a few years since, in pursuit of pure bred Merinos. I called on a man who had advertised his sheep in the Albany Cultivator, to be not only full blood Merino, but of the best quality. I expected that I should deal with him. Some of his sheep looked very well, but he could not give satisfactory evidence that he had a full blood Merino in his flock, or that he had ever owned one, and I bought none of him. I found also that the credit of his flock was low in the vicinity where he lived, and that he was trying to raise it by buying some from a flock which was acknowledged to be full blood. It was in April, 1845, he offered $500 for ten ewes, coming two years old that spring, and were with lamb. The owner refused to let him have them; when a stranger, I presume, could have bought them, to take to some other part of the country, for half that sum.

Many sheep which are three-fourths or seven-eighths Merino, will have all the external appearance of full bloods, especially to those who are not good judges.

I have spared neither pains nor expence to get up a flock of pure blood Spanish Merino, and I feel confident that I have accomplished my design. I have about two hundred and forty, besides lambs. My main stock buck, that I have been improving from for three years past, was four years old last spring, and sheared thirteen pounds, well washed on the back, after siring, the fall and winter previous, one hundred and thirty lambs. He had grass only during the summer and fall, till near the time that he was placed with the ewes. He then had what oats he would eat till January, and some after that, till the pasture was good to keep him in good condition. His fleece came to $6.50, as I sold my entire clip for 50 cts. a pound, cash. Reed Burritt.—*Burdett, N. Y.*

POTATO ROT—Dr. LEE'S THEORY.

I have seen no thoery of this dreadful malady that has not its difficulties. The objections of "S. W.," to Dr. Lee's theory, in the June number of the Farmer, might be answered, perhaps, by saying, that in all the examples that he has given, the soil is different from what it is said to be west of the Rocky Mountains; viz., an "alkaline, volcanic soil." The climate is certainly different; and this, with the probable difference in the soil, might account for the prevalence of the rot here, and its absence there.—But a difficulty presents itself in the shape of a query, "Why should the potato be the only vegetable product that deteriorates, since nearly all our grains, and most of our garden and field vegetables are of foreign origin." Perhaps this query may be answered, by saying, that all these are raised from the *seed,* while the potato is raised from the *tuber.* The answer would be satisfactory, if potato *seed* would always produce sound *tubers.* Dr. L.'s theory, however, explains this also.

There is one way by which this theory can be satisfactorily tested; viz., by ascertaining whether the disease prevails in those countries where the potato is indigenous. Perhaps, however, it may have degenerated even there, through "bad culture;" yet this would prove nothing without the prevalence, or at least, the existence of the disease. If the disease be found not to exist there, it would be well for somebody to import either some seed, or tubers, or both, for use in this country. Will not some one try it, and give the results to the public.

In Com. Patents Rep., 1849–50, page 396, is given, by Rev. Edward Sidney, A. M., of England, a theory of the potato malady, which appears to me to approximate nearer to the truth than anything I have yet seen on this dark and difficult subject. When it is considered, that every animal and every vegetable, so far as is known, has some living appendage in the shape of lice, parasites, or something else, it certainly does not require any great degree of credulity to admit the existence of a *fungus,* invisible to the naked eye, yet competent to all the mischief ascribed to it. We have numerous examples of the effect of the smallest conceivable quantity of a substance producing the most disasterous effects; as in the sting of a bee, (which sometimes causes death,) the bite of a snake, &c. The invisibility of the fungus, therefore, suppose one to exist, is no objection to this theory. H.—*Down East, June,* 1851.

Messrs. Editors: — Three times I have seen the experiment of planting potatoes on land partly covered with thick orchards, with the same results, *i. e.,* the potatoes on that part not shaded, were nearly all rotten at time of digging, while those which grew in the shade of the trees were nearly all good and remained very sound.

Another, where potatoes were planted on ground lying in the shade of south and west woods, potatoes came out nearly all sound and good, and remained for the season, while thousands of bushels which grew on very similar land adjoining, without shade, rotted and vanished like a frost in June.

Another: Whitman Brown, of Warren County, Pa., selected select ground for potatoes on the southwest side of a hill, a virgin soil, except it had been pastured a number of years. He carted a large quantity of barn-yard manure upon it, and fitted in extra order, and tended it the best he knew how. At digging time there was a yield of near 500 bushels per acre. On the first of January following they were all rotten, and Brown was buying potatoes for his table use. At this same time Francis Brown, living three-fourths of a mile only from the former, planted on the northeast side-hill nearly opposite, and on buckwheat stubble. He had a less yield, but the potatoes were all sound.

Another: A Mr. Rice, of Sandusky County, Ohio, fitted his potato ground without manure, planted and covered well, then hauled the manure or straw and covered the ground well all over. At harvest time he took a very handsome yield of very fine potatoes that were good and lasting, while on all the adjoining farms there was nearly a total failure. A potato exposed to too great a heat will in time decay, with the same appearance; but frozen potatoes appear very different. Try it, any one. If too great a degree of heat will in time produce an epidemic in animated, why not in inanimated nature? If our species of potatoes grow and do well in hot climates, I give it up: but with my present views I keep all undecayed manures out of the soil where I plant potatoes. If I apply it at all, I put it on the top to keep the ground moist and cool. S. M. N.—*Shawnee, July,* 1851.

TO DESTROY UNDER-BRUSH.

"**What** is the best time to cut under-brush, &c.?" In the June number of the Farmer the above question is proposed by "A Subscriber," to which I propose to give an answer, combining both a little experience and a little theory. Having been brought up on a farm, I used to hear much said by farmers in regard to the "best time" for cutting bushes, &c., and remember well the many uncertainties that existed, and the various opinions given on the subject. Some recommended to cut them at one season, some at another. Some regarded the "moon," others the "signs," &c. I also remember that the same kind of under-brush, if cut at one season, would start again and grow luxuriantly; but, if cut at another, would be completely "used up." I have also, within the last few years, had opportunity to notice the same facts; and the conclusion to which I have arrived is, that different shrubs, or bushes, trees, &c., may be cut at different seasons of the year. Some are killed by cutting as early as the first of July; others, by the first of August; and so on till October, or even November. The rule is this: "Cut any plant, or shrub, about the time that it has done growing for the season, and its destruction is almost certain." If cut before this time, it will generally start again the same year; and if deferred much beyond this time, it will generally start again the next year. The exceptions are few. So much for the facts, now for the theory.

1st. In the spring of the year all roots are vigorous. Hence, if a tree or shrub be cut at this time, or while in full growth, the root will send forth a new set of shoots. The exceptions are—1st, Evergreens generally, as pine, hemlock, spruce, &c. 2d, Those that have a copious flow of sap in the spring, as the maple, birch, &c. Yet even some of these will start again if cut soon after the buds have opened; *i. e.*, after the spring flow of sap has ceased; except in the case of old or large trees, in which the root appears not sufficiently vigorous, or the evaporation from the stump too rapid, to allow of the formation of new shoots.

2d. In autumn, when a shrub or tree has done growing for the season, the active energies of the root cease, being, perhaps, somewhat exhausted by its summer action. If, then, the bush or tree be cut after it has done growing, but while the stem and leaves are fresh and full of sap, the vital force of the root will rarely be sufficient to cause a new growth; but if left till the foliage is dead or dying, the energies of the root are restored by the return of the sap, and are ready for action again as soon as the season of growth shall return. Hence, too early or too late cutting will be equally unsuccessful.

Cut your under-brush, then, at the time above specified, and it will rarely start again. If it does, the growth will appear stinted or sickly, and soon die of its own accord, or a second cutting at the proper time will insure success. The same rule applies to all other plants, as Canada thistles, milk-weeds, &c., &c., with greater or less certainty, according to the greater or less vital force, or tenacity of life, peculiar to the root of each kind of vegetable.

The "proper time" can easily be determined by observing whether new leaves continue to appear at the ends of the prominent branches. When the end leaves are of full size, and a bud is seen at the end of the branch, then (or soon after) is your time to cut. If deferred long beyond this time, or till the leaves begin to turn yellow, or fall, cutting will be of little use, as the root will be "strong" for a new start on the opening of a new spring. H.—*Down East, June,* 1851.

Messrs. Editors:—Your correspondent, "A Subscriber," in your June number, requests you, or some one, through the Farmer, to tell him when is the best time to cut under-brush, to prevent its sprouting up from the root again. Perhaps you, or some one else, can give him more correct information than I can; yet, experience has proved to me, that in the old of the moon in August is the best time to cut brush of any kind, and small timber. In 1845 I bought a farm, and on the farm at the time, there were several patches of willows; and as they added nothing to the beauty or profit of the farm, I took my oxen and chain, and went to work in earnest, and tore them all out, root and branch, excepting one patch, which I found to be too large to extricate in that way. I let them stand till the old of the moon in August, and then I cut them down; but had some fears on account of the roots being so numerous, and running in wet, marshy ground; but my fears proved to be groundless, as I believe there has not a single sprout started, and the old stumps are now dead and rotten. I have known brush that stood in the open field, around stumps, &c., to be cut at the time above named, and it proved effectual in destroying them. O. S. Curtis.—*West Martinsburgh, Lewis Co., N. Y., June,* 1851.

S. W.'S NOTES FOR THE MONTH.

The Crops—Wheat harvest has now commenced. The worm *C. tritici*, has injured some fields of wheat; but the Mediterranean and most of the other varieties sown on a quickened, well prepared soil, escaped its ravages. It is at length admitted by every practical farmer who loves his calling, that judicious manuring, good tillage, and the timely sowing and planting, is the most effectual means of getting the start of both worms and bad seasons. Up to this time, 15th July, we have had a very growing season for all sorts of crops; heat and moisture are now doing much in all dry, well tilled fields, towards crowning the labors of the husbandmen. Yet, many farmers on flat, undrained land, complain of nature's lavish blessing, in the form of frequent warm showers. If Indian Corn is not a good crop this season, the fault will be in the farmer. If he has attempted to plant a flat, undrained field, he will be sure to let the fact be known, by the industry he now displays in hunting up turnip seed, to sow the vacant places in his field of corn. But the season can well afford to bear the blame it never fails to receive from such tillers of the earth's surface.

Cow's Milk.—A committee of the academy of Medicine in the city of New York have made a long elaborate report, in which is a table of the analysis of both grass-feed, and still-fed cow's milk. It is evident that some one interested in the character of Orange County milk, must have played a trick on the learned, but unexperienced committee; as the analysis shows that Orange County milk is twice as rich in butter as the milk from the grass-fed cows of Bloomingdale. *Prima facie* evidence that the Orange cow that gave the milk analyized was a *famous* cow for butter, and that the Bloomingdale cow gave milk so poor in fatty matter, as to be fit only to sell by measure, to the gullible New Yorkers. The character of still-fed cow's milk for healthy flesh and bone forming elements, is established by this analysis; it being deficient, like Bloomingdale milk, in butter only. It is true that still-slop made milk fails in that flavor which is peculiar to grass made milk; but chemistry, says Boussingault, ever fails to detect these volatile principles which give to butter its agreeable flavor.

Free Trade in Bread. — Since the great reduction in the duty on imported provisions, and the abrogation of the corn laws in England, our export of these articles to England, Ireland, and Scotland, has been steadily increasing. Our export of flour to Great Britain, since the 1st January, is about one million and twenty thousand barrels, and nearly a million bushels of wheat. It must be recollected that this is only the half year's export. The present low price of flour in our Atlantic ports, must give a great impetus to the export of that article throughout the year. Our export of Indian Corn to Great Britain was 1,289,589 bushels, in 1850. This year the export of corn, so far, has been much larger; but the shipment is limited at this time, by its generally heated condition. When competition on our canals and railroads, and across the ocean, reduces the price of transportation, Indian Corn will be exported in the ear; but not till then can John Bull eat a Johny-cake of the true nutty flavor, peculiar to the corn bread of the south and the Johny-cake of Yankee land. Methinks the day is coming when the value of the cob in England, for burning and its ashes, will pay for its frieght across the Atlantic.

Waste of Manure. — A distillery near Albany, forbidden to erect pens wherein to feed cattle and hogs, discharges into the North River daily, the slop of 400 bushels of grain. At Wallabout, near Brooklyn, N. Y., the sweet fermented slop from a distillery there, running 800 bushels of corn daily, is discharged into Wallabout creek. The Long Island farmers purchase leeched ashes in Western New York, which are transported to Long Island at a great expense, when here, at their own doors, the phosphates of potash, soda, and lime, with nitrogen *ad libitum*, is spouted to waste in the briny deep! But they manage these things better in Oneida and Madison counties; there is made from still slop the best beef sold in New York market—there not a shovelful of the manure made by the cattle, is lost—it is all sold at 25 cents the load, to the hop and corn growers of that well farmed region. *Waterloo, July*, 1851.

SHEEP THE BEST STOCK.

Messrs. Editors:—I have been of the opinion ten or twelve years, that sheep were the most profitable stock of the farmer. I have tried to get the best I could, almost regardless of price. I first got the Saxony Merino. Their *wool* was fine, but their *fleeces* light, averaging about two and a half pounds; besides, about one half of their lambs would die. I felt dissatisfied, and bought some Bakewell Sheep. Their wool was very coarse; their fleeces would average about four and a half pounds each; their lambs were fine for the market. They may be the best sheep near some large city, but not for Western New York. I next crossed my Bakewell Ewes with a Saxony Buck; this made the wool much finer, but rather lessened the weight of the fleeces: they were better than the Bakewells. Last season I read a statement in your valuable paper, made by Reed Burritt, of Burdett, of the weight of fleeces of his sheep. I felt a little incredulous about it, but was determined to try them; so last fall I selected twenty from his yearling ewes and one buck, which, he said, sheared last June, a year, nine pounds, eleven ounces, of washed wool. He thought he would shear ten pounds, and the ewes five pounds, the next shearing. He sheared a little short of nine pounds; but he, with the twenty yearling ewes, averaged just six pounds and a half each fleece. Mr. Burritt certified to me that they were full-blooded Pauler Merino Sheep. I think they are so. Other farmers may want better sheep, but, at present, I am satisfied with the Pauler Merino Sheep. S. Hull.—*Clyde*, 1851.

THE BEE MOTH.

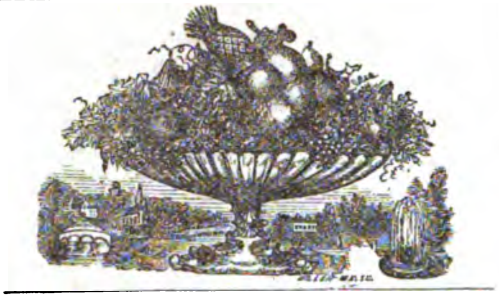
There is no enemy more destructive to bees than the *wax moth*. This insect is a small, light greyish miller. Lying quiet by day and coming forth at evening, she enters the hive and deposits her eggs, which produce worms, that grow to the length of an inch. These worms are what do the mischief.—There is no danger if the hive is well filled with bees, but at this season many families of bees have become weak through too much swarming, and such are liable to be destroyed. There is no way to prevent the miller entering. You can only watch your hives, kill the millers as they rest by day on the outsides of the hives or wherever found, destroy the worms when seen or when in their cocoons, and as soon as you find a hive in danger, which is known by large quantities of small brown particles of comb, upon the bottom board, the bees should either be driven out, or enough of the combs cut out to enable the bees to defend themselves. You had better disperse the bees among your other hives, although many will be killed by bees of hives in which they enter, rather than allow a myriad of worms to be brought into existence, which will jeopardize your other hives. I never have lost any families by this insect, in consequence of systematic care in guarding against this evil. When the millers become plenty, I have a method of destroying them by the *dozen* in a *decoy* trap, which soon clears them off.

T. B. Miner.

WIRE FENCE.

Messrs. Editors:—In answer to H. G. Skinner's inquiry concerning the construction of wire fences, I would say, plow four rounds, leaving four feet unbroken in the centre; scrape, with a scraper six or seven feet long, a high narrow dike; repeat a second time. Sharpen your posts, and drive eight feet apart. Put two pine boards, six inches wide, at the bottom, and three wires—first, No. 9—second and third, No. 10. Get nails made two inches long, with flat heads; punch holes through the heads, and fasten to every other post—say sixteen feet apart—this holds the wire firm, and also keeps it free from the wood and prevents rust. I tried this method two years ago last spring, and find it superior to anything of the kind I have seen or read of elsewhere. I tried wire of No. 12 and 13, but find it too light. N. R. Jerome.—*Huron Co., O., July*, 1851.

P. S.—I think this the best fence for prairie that has yet been tried.



Horticultural Department.

EDITED BY P. BARRY.

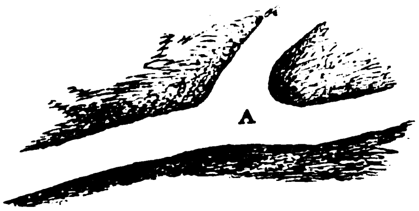
FLOWER-GARDEN WALKS.

IN no part of the arrangement of ordinary flower-gardens is there greater violation of good taste than in the disposition and formation of the walks. Graceless and unmeaning curves, fine lawns spoiled with strips of fiery gravel, and unsightly junctures, and surfaces inconveniently convex, are amongst the incongruities one constantly meets with, especially in the gardens of villa residences.

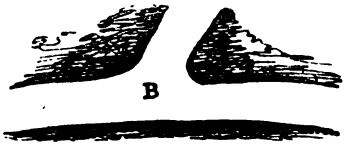
If a good lawn is the pride of an English garden, a tastefully disposed and well-formed walk is only second in importance. The beauty of the one only exhibits more glaringly the defects of the other. In the majority of instances walks are too narrow. If you have a walk, let it be at once convenient and in keeping with other parts of the garden. However well arranged the lawn and shrubberies may be, a narrow, paltry walk, gives an air of meanness to the whole garden.

Every deviation in a line of walk should result from some *visible* cause. The contortions so often seen are in the worst possible taste, or rather in no taste at all. They speak as plainly as possible to the fact that the designer executed the stereotyped curve from imitation only, and not from an appreciation of the principle of arrangement. To avoid some disagreeable prospects, to gain an interesting view, to reach some pleasing object in the grounds, are some of the reasons for curves in a line of walk. Curve after curve of walk on an open space of lawn, without purpose or object cannot be too severely deprecated.

The junction of walks should be at as great an angle as possible. Thin strips of grass between diverging walks, like narrow points in a shrubbery, are highly objectionable, and should ever be obviated, if practicable. To avoid the narrow strip of Grass, in the case of walks, an expedient, as represented in the sketch A, is often resorted to; but from the amount of gravel thus rendered visible, the practice is not to be recommended. Large surfaces of gravel thus made prominent are offensive to the eye, and tend to curtail in appearance the extent of a garden; and besides, each walk should be definite in its direction, which in such arrangements as that sketched, is not the case. One is as much a main walk as the other. Rather, as at B, indicate that one path diverges from the other, merely taking off the angles of the turf formed by the juncture. The effect of the first example is bad on paper, but infinitely worse on a garden lawn. Of course in a carriage drive or other road, more relative scope for turning must be allowed than is permitted in a garden walk.



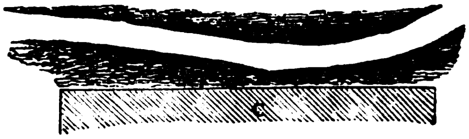
A



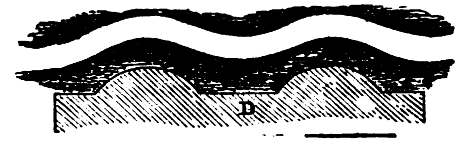
B

More than one curve should not be seen from the same point, looking in the same direction, as such an arrangement is not pleasing, and you see too much of the garden at once. It detracts from the interest. Of course, as a general rule, no pleasure-ground walk should be perfectly straight, but exceptions will sometimes occur. Supposing them unavoidable or necessary, good taste will furnish the necessary and appropriate accessories.

Curved walks, by a straight line of building, as at C, are in bad taste, as likewise is a walk following each outline of a building, as at D. Examples of both are abundant.

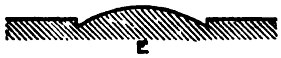


C

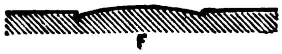


D

The surface of walks should be only slightly elevated, and not as is often seen, perfectly convex—so much so, as to render them inconvenient for walking on; *merely* raised in the centre is all that is necessary. The depression below the grass margin should be but slight, and the elevation only in a corresponding ratio. A couple of inches of bare earth at the sides of a walk, constantly kept bare with the edging-iron, cannot be said to add to its beauty.—I would banish the edging-iron from the flower-garden walk, and never allow a "raw"-edge to be seen. The beauty of a walk so treated is not to be compared with one otherwise dealt with. At the sketch E is represented the section of a walk to be avoided;



E



F

at F, one to retain. The effect of the two in reality will not bear comparison, to say nothing of the comfort in walking on the flatter surface, the primary object in the formation of a walk.—*G. L., in London Gardeners' Chronicle.*

NEW AND SUPERIOR CHERRIES.

Elliott's No. 10.—This I consider the best of all Dr. Kirtland's seedlings that have fruited with us; indeed, I have no hesitation in saying that it is the highest flavored light-colored cherry that I have ever tasted; add to this, large size, tender flesh, productiveness and early bearing, will give it a reputation which no variety of this class enjoys. If I were to plant only one cherry tree, it would be Elliott's No. 10. Among all the European variety, there is not one that will compare with it—ripe June 19th.

The Doctor.—Said by Elliott to be the earliest of Dr. Kirtland's seedlings, but here in Rochester it ripened at the same time with No. 10, and hangs longer on the tree; is much smaller, and cannot be compared in flavor to it.

Rockport Bigarreau.—This variety is ripe with us a very few days after No. 10, and comes next to it in every respect. It is a singular fact, that Dr. Kirtland's seedling cherries combine more good qualities than all the European varieties together, (Dukes and Morellos excepted.)

Reine Hortense.—Among the Early Duke variety this stands No. 1, both in size and flavor. It is the only really valuable cherry that has been imported in many years. This, and the Belle Magnifique, which comes next in order of ripening, are the most valuable of this class of cherries.

Early Purple Guigne.—Much superior, both in size and flavor, to Bauman's May, which ripens at the same time. It seems strange that this truly valuable cherry should be so little cultivated. Ripe May 14th.

Belle de Orleans.—Came from France with a high reputation, but, I am sorry to add (after two years' trial,) has not come up to my expectation. Although it is of good size, sweet and tender flesh, yet it lacks flavor. Ripe about 20th of June. E.

HORT. SOCIETY OF THE VALLEY OF THE GENESEE.

The spring show of this Society was held just after our last number went to press. The show of flowers was exceedingly fine, particularly of roses and pæonies. John Donnelan exhibited a fine collection of seedling pæonies, and Ellwanger & Barry thirty-one varieties. In both collections there were some exceedingly fine.

Fine collections of roses from J. J. Thomas, of Macedon, Ellwanger & Barry, and others.

The boquets, from ladies of the city and country, surpassed in beauty and numbers any previous exhibition. We counted some seventy-five.

It was rather early for strawberries, but the exhition was fair, though not equal to previous ones.—M. G. Warner presented fifteen varieties; Ellwanger & Barry, 17, among which was their seedling *Genesee*, one of the most showy strawberries exhibited; R. G. Pardee, of Palmyra, several varieties, extra fine.

Mr. Webster, from Bissell & Hooker's nursery, exhibited an interesting and beautiful collection of calceolarias—the finest ever shown.

C. J. Ryan & Co., a collection of green-house plants.

Northern Spy apples were shown by J. H. Watts, as finely flavored as at mid-winter.

Dr. Long exhibited Roxbury Russet and the Kingsbury apples.

L. A. Ward, the President of the Society, though unable to be present, forwarded a fine dish of grapes, among which we noticed the Black Hamburgh.

The display of vegetables was quite small. John Gray exhibited half a bushel of ash-leaved kidney potatoes, of good size and mature; John Donnelan, peas, radishes, and cucumbers; C. F. Crossman, lettuce, cucumbers, pie-plant, &c.

STRAWBERRIES.

Burr's New Pine.—This superior variety fully sustains its reputation. Indeed, we have now specimens, (not only a few, but one-half peck,) from our friend Mr. Pardee's garden, of Palmyra, much larger and finer than at any previous season.

Hovey's Seedling.—For large size, this stands still at the head of the list, and I consider indispensable to any collection.

Boston Pine.—This is a very productive variety, of good size, and rather higher flavor than Hovey's seedling: for market, it is a very valuable variety.

Rival Hudson.—This is the *great* market berry, very productive; but I must say, for my taste, too acid.

Genesee—Ellwanger & Barry's Seedling.—This is decidedly the finest looking berry I ever saw; of good size and flavor.

Monroe Scarlet (E. & B.'s).—Is another desirable variety, of larger size and more round than early scarlet; very productive, and ripening about the same time as early scarlet.

Ellwanger & Barry's No. 1.—This is the highest flavored of all strawberries, Burr's New Pine not excepted. E.

FRUIT TREES.

The dwarfing of Fruit Trees is the system much practiced now by our nurserymen. It is at once useful, and, for small gardens particularly, practical. Trees thus treated take up but little space, and a greater variety may be planted on limited grounds. The apple, pear, and cherry tree, grown in this manner, are very ornamental, and we know of but few sights more pleasing to the eye, than either of the above named trees, growing close to the ground, with their branches well laden with fruit. Of cherries to dwarf, the "Reine Hortense," a French variety, grown by Ellwanger & Barry, as well as others of the nurserymen, is well adapted. The foliage of the tree is rich and glossy, and the fruit one of the most imposing in size. Quality of the fruit first rate. It is somewhat later than many other kinds. To our taste, the Belle de Choisey, Downer's Late, Belle Magnifique, with the Reine Hortense, are amongst the best cherries grown, and ought to be in the garden of all true amateurs. J. H. W.

In consequence of the space occupied by Mr. Barry's letters from Europe, we are compelled to curtail our Horticultural Department. Mr. B. will be home in season to attend to this department next month. Having been authorized to have drawings taken for us, of whatever he deemed valuable, Mr. B. writes: "The taking of drawings is prohibited, except by permission of the proprietors of articles; and all the English articles are well watched, for they apprehend imitation."

Ladies' Department.

LOVE OF FLOWERS.

While in England, no sight was more pleasing to us than the love of flowers so general among the people—it is shown equally by the low and the high, the young and the old. Coleman observed this, and we take the following remarks from his European Tour:

"Looking out of my window a short time since, I saw that the laborer wheeling his barrow before the door had his button-hole decorated with a beautiful geranium. I went into the street, and the driver of the omnibus, whom I first met, wore a handsome nosegay. I met a bridal party, and, besides the white favors worn by all the servants in attendance, each one had a bunch of flowers at his breast. I met the crowd of magnificient equipages hastening to a drawing room to pay their courtly homage to a sovereign queen, whose virtues and most exemplary demeanor render her worthy of the homage of true affection and respect; and every lady bears in her hand a magnificient boquet; and the coachmen and the footmen seem to emulate each other in the gayety and beauty of the flowers they all wear. At St. Paul's, at the opening of the term of courts, the long procession of grave and learned judges, who then go in state to church, appears, each one, with an elegant nosegay in his hand. At the opera, upon the breathless and successful competitors for public favor, in the midst of a tempest of applause, descends a perfect shower of floral wreaths and rich boquets.

"I sympathise heartily in this taste of the English for flowers, which thus prevades all ranks, and, flowers being accessible to all, and among the most innocent and the cheapest of all pleasures, diffuses a vast amount of enjoyment."

We have good reason to believe that the love of flowers is increasing in our own country. We had more than a thousand applications for packages of flower seeds, from our female readers, all of which were promptly supplied, with the exception of eight or ten. About this number of letters were mislaid, and not discovered until too late to send this season. In the fall we will furnish these with a superior collection, and thus endeavor in some measure to atone for our neglect. We have not learned how our friends are prospering in growing annuals. We have in our garden now, Mignonette, Portulaccas, Balsams, Bartonia Aurea, and Ten Week Stocks, all finely in blossom; and they prove to be fine sorts. We should be pleased to hear from the ladies, of their success.

We have a fine collection of *California Annuals* in blossom, furnished us by Thorburn, of New York. They attracted attention at our Horticultural Show, as they deserved. We are saving seed, and between this and spring we shall be pleased to furnish them to any of our lady readers who wish to add to their collection of fine annuals.

PREMIUM FOR BREAD.

Messrs. Editors:—In noticing premiums awarded by the State Agricultural Society, for articles recorded in a former number of the Farmer, I was astonished to find none for the best bread. There may be some cause for this, of which I am ignorant; if so, I should like to be informed; otherwise I consider it a great oversight to neglect the "staff of life." What is there in all your mechanism, grains, &c., but has some bearing, in the end, to bread? We could make a good meal without many of the articles for which we find medals, &c., awarded; but, could we make a single meal without bread? Then of how much importance is it that it should be good. If there is any encouragement in this offering rewards, why not to the good bread-maker? There is nothing in all household affairs, and perhaps not many things in the agricultural line, that requires more good understanding, quickness of perception, &c., to render it what it should be, than bread-making. The need of encouragement we could ascertain, did we enter our district schools at 12 o'clock, or even our wealthy neighbors' houses. In these we should see black bread, heavy bread, milk-emptyings bread,—in fact, all kinds of bread but good bread. This is not in the wheat, it is not in the mill,—it is in the making, as I well know. If the disposition and character is formed by the food we eat, as some affirm, it is no wonder we have some heavy, sour characters, and tends to point out the necessity of having the food most general among children, wholesome and well prepared. In visiting the American Institute, at New York, last fall, I there saw bread exhibited from different bakers. Why not encourage the same in families, when it is of such vast importance? If it is wrong, I know the discerning mind of the editor of the Farmer will endeavor to make it right, therefore I will submit it, and respectfully subscribe myself A Farmer's Wife.

We know of no excuse for this neglect of the "staff of life" by the State Society, unless it be the length of time after made before it could be inspected by the judges and the public. At our County Fair last year, about a dozen different specimens of bread were presented, and it formed by no means the least interesting part of the exhibition.

LABOR-SAVING SOAP.

Take 14 lbs. of bar soap, or 5 gallons of good common soft soap, 3 lbs. of sal soda, 1½ lbs. rosin made fine, 2 oz. spirits turpentine, 8 oz. salt; boil all these in 5 gallons of soft water, until the rosin is melted; then let it cool. When cold, it may be cut and put away for use, when we add about double the quantity of water to what soap is to be used at a time.

Manner of using.—In a common farmer's family of eight or ten persons, we put a half pint of reduced soap into a quantity of water sufficient to soak all the white clothes at a time, and if convenient, over night. In the morning we pound the clothes a little, or rub the most dirty spots a little, then wring them out and put them to boil in water similarly soaped, for a few minutes; then suds and rinse. Some do not boil, and they say their clothes are clean. Calico clothes are put in the water where the white clothes were soaked, and pounded or rubbed a little, but no additional soap is to be used. Hard water is said to be as good as soft for washing, but here it is all soft. Our women do their washing in half the time they could do it with common good soap, and it is better done. My shirts were always hard to wash, and when done, there would often be streaks not entirely clean; but now they are always clean. Daniel Edwards.—*Little Genesee, N. Y., July,* 1851.

Youths' Department.

THE ROCK PIGEON, AND EUROPEAN QUAIL.

The rock or wild pigeon of Europe is well known as the inhabitant of the pigeon houses in various parts of the world, or "dove cots," as they are more frequently called, buildings expressly erected for the purpose of containing colonies of these birds. In this state, where they enjoy a perfect freedom of action, and are nearly dependent upon their own exertions for support, they can scarcely be called "reclaimed," much less "domesticated." Man, indeed, has only taken advantage of certain habits peculiar to the species, and by substitution of an artificial for a real cavern, (their natural habitation,) to which the pigeon house may be compared, has brought it into a kind of voluntary subjection, without violating, or at least greatly infringing upon its natural condition, and has rendered it subservient to his benefit and use.

In its natural state, the bill of this bird is blackish-brown; the nostril membrane red, sprinkled, as it were, with a white powder; the irides, pale reddish-orange; the head and throat, bluish-grey; the sides of the neck and upper part of the breast are dark lavender-purple, glossed with shades of green and purplish-red; the lower part of the breast, abdomen wing coverts, as well as the upper mandible, bluish-grey, the greater coverts and secondaries are barred with black, forming two broad and distinct bars across the closed wings; the lower part of the back is white; the rump and tail coverts, bluish-grey; the tail, deep grey, with a broad black bar at the end; the legs and feet are purplish-red; the wings, when closed, reach within half an inch of the end of the tail.

ROCK PIGEON.

It is from the wild rock pigeon, *(C. livia,)* that all those numerous varieties, or, as they are frequently termed, "races," of the common inhabitants of the dove cot have descended, which are so highly prized, and fostered with such care and attention by the fancier, or amateur breeder; for, however diversified their forms, colors, or peculiarity of habit may be, they are all considered as having originated from a few accidental varieties of the common house pigeon, and not from any cross of that bird with other species, no signs nor marks whatever of such being apparent in any variety known to us.

The *European Quail* very much resembles the American. Besides beauty of form and plumage, the song of the common quail of the Old World is no slight recommendation to the amateur. In the breeding season, that of the male commences by repeating softly, tones resembling *verra, verra,* followed by the word *piercroie,* uttered in a bold tone, with the neck raised, the eyes shut, and the head inclined on one side. Those that repeat the last syllables ten or twelve times, consecutively, are the most esteemed. That of the female only consists of *verra, verra, pupu, pupu,* the last two syllables being those by which the male and the female attract one another's attention; when alarmed or angry, their cry resembles *guillah!* but at other times, it is only a murmur, resembling the purring of a cat. This bird never sings when left to run about in a light room, except during the night, but continually when in a darkened cage.

EUROPEAN QUAIL.

In a wild state, the quail feeds on wheat and other corn, rape seed, millet, hemp seed and the like. It also eats green vegetables, as well as insects, and particularly ants' eggs.

* * *

Eds. Gen. Farmer:—As "variety is the spice of life," perhaps the following problem and enigma may not prove unwelcome to the readers of that always interesting and acceptable portion of the Farmer, the "Youth's Department."—Please publish and request solutions to them, and oblige W. A. Eggleston.—*Elmwood, Ill., July,* 1851.

Arithmetical Question.—A farmer has five cribs of corn, containing altogether 2000 bushels. The first contains 275 bushels less than the second; the second, 200 more than the fourth: the fourth, as many as the first and fifth; and the fifth, one-fourth as many as the first; the remainder is the number of bushels contained in the third crib. How much corn is there in each?

Enigma.—I am composed of 16 letters.

My 1, 3, 6, 6, 7, 8, 8, 9, 10, is one of the United States.

My 2, 5, 12, 13, 1, is a part of the human body that we could not for a moment exist without.

My 4, 16, 10, 9, 6. is a county in the State of New York.

My 11, 12, 14, 5, is what all who may solve this enigma, are, or should be, seeking after.

My 14, 12, 6, is a very singular biped.

My 15, 12, 13, is a part of the body.

My sixteen letters, if you're wise,
Will show what's now before your eyes.

Editor's Table.

The New York State Fair.—The Great Fair of the New York State Agricultural Society is to commence at Rochester, on the 16th of September, and continue four days. The premium list will be found in the April and May numbers of the Farmer. We are pleased to inform our readers that the arrangements are perfecting as speedily as possible, under the direction of the President of the Society and the Executive Committee, aided as they are by the well wishes and labor of the citizens of Rochester. The ground is now being drained and leveled, and placed in the very best condition. The place selected is about a mile and a half from the center of the city, and commands a fine view of the surrounding country, the river, and the city. Every thing looks favorable; and judging from present appearances, we flatter ourselves that the Fair of 1851 will be far ahead of any previous one. The committee of citizens are taking especial pains to provide for the comfort of visitors.

The President has received instructions from the Government, whereby all animals and articles intended for exhibition at the Fair, are to be admitted from foreign places free from duty, to be entered according to the provisions of the Warehouse act; and the Fair Grounds at Rochester are to be deemed constructive warehouses, where all animals and articles from abroad, duly entered, shall be under the supervision and custody of the officers of the Customs.

The steamboats on Lake Ontario, and the railroads generally, have agreed to carry passengers at *half price*, and stock, &c., for exhibition, free, as usual.

The following are the superintendents of the different departments of the Fair Grounds:

Cattle—Wm. H. Sotham, Black Rock.
Horses—J. B. Burnett, Syracuse.
Sheep—Lyman Sherwood, Auburn.
Swine—R. Harmon, Wheatland.
Poultry—L. H. Haddock, Buffalo.
Floral Hall—L. A. Ward, Rochester.
Dairy Hall—Israel Denio, Rome.
Manufacturers Hall and Machinery—L. B. Langworthy, Rochester.
General Superintendent of the Grounds and Charge of the Entrances—Henry Wager Utica.
Mechanical Motive Power for Moving Machinery—Wm. Kidd, Rochester.

James P. Fogg has been appointed Local Secretary, who will give all desired information, and to whom articles for exhibition may be consigned by persons who cannot accompany them.

The monthly meeting of the Board for August, will be held at Rochester on the 7th of the month, at 3 o'clock P. M., at the Eagle Hotel.

The President has addressed the following circular to Presidents of County Agricultural Societies. We hope it will receive attention.

Oakland, near Geneva, N. Y.,
June 16th, 1851.

Dear Sir.—The application of science to our vocation as farmers, is producing results, both interesting and important. Although the benefits are yet limited in extent, they are sufficient to excite our zeal, and induce us to seize every opportunity to extend directly and indirectly the many advantages due and appropriate to our profession.

Allow me to call your attention to a branch of inquiry which I am induced to believe will be advantageous to the farmers of your county; I allude to the changes which have from time to time taken place in the organic and inorganic substances of your soils, and the influences which such changes seem to have exerted; this inquiry needs time and examination, yet the movement will I hope lead agriculturists into a train of observation useful and profitable. As one step connected with the inquiry, and which may be made at once useful to your county, and indirectly beneficial to the farmer, I would suggest that specimens of any and *every mineral* existing within your limits be collected, also of all earths or clays of more than ordinary character, and which are needed in the various arts and manufactures; let them be arranged and displayed neatly in cases, with the name of the county conspicuously displayed on each case, and sent to the approaching fair at Rochester in September.—Such exhibits will attract the attention of men of science, of artists and artisans, and tend to give proper notoriety to localities which at present are little known.

J. Delafield.

Farming Lands near the Federal Metropolis.—The reader will find in our advertising columns, that M. D. W. C. Lawrence desires to sell a farm of about 190 acres, near the city of Washington, and refers to one of the Editors of this paper in connection therewith. A skillful farmer and fruit-grower who has means to pay for this property, we have no doubt might do well in purchasing it. Hay rarely sells below $17 a ton, for a good article, and often at $20, in Washington. One can contract all his butter at 25 cents a pound the year round; and he could pretty safely calculate on $1 a bushel for potatoes. The land about Washington is not by any means so fertile as in Western New York, but manure, and particularly guano, operates with great success upon it. 200 lbs. of guano on a soil samiliar to that of Mr. Lawrence, has given a crop of 30 bushels of wheat per acre this season, on a forty acre field. (This is the estimate of good judges, the grain is not yet measured.)

Hedges.—The following excellent remarks are from *The Family Visitor*, Edited by Prof. Kirtland:

In some recent expeditions into different sections of Ohio, we have observed several unsuccessful attempts at hedging. Our confidence in the Osage Orange and the Buck Thorn as materials for inclosing farms is increased rather than diminished by our late observations. The failures have arisen from an anxiety to grow a hedge in one or two years which requires double or triple that amount of time. The line of quicks, whether the Osage Orange or the Buck Thorn, must be repeatedly cut back near to the ground, from year to year, or even twice during a season until a basis is established so thick, wide and firm that neither man, beast, or bird can penetrate through it: then a top can be grown in one or two seasons which will afford a permanent and effectual defence against all intrusion. Take this course and success will attend your efforts, but haste will result in failure, as some of our Cincinnati and Columbus friends can testify.

The regular old fashioned pruning shears are preferable to all other implements for dressing hedges.

L. G. Morris' Second Annual Sale.—Mr. M. has sent us a detailed account of his sale, the amount obtained for the different animals, names of purchasers, &c., for which we can not find room. The following will be interesting:

Eds. Gen. Farmer:—I send you a correct statement of my sale, for publication; if you wish to insert it, do so.

The thorough bred Short-Horns were very few, and such as I could spare from my herd. Nos. 4 and 10 were starred animals, and not recommended. Take those out of the lot, and the cows, heifers, and heifer calves, ten in number, averaged $104.12½ per head. It will now be seen that I have cleared all animals off my farm, except thorough breeds of each kind, and I wish to be put on record as such hereafter. My thorough-bred bulls and bull calves, four in number, averaged $126.12½ per head. The improved dairy stock, consisting of cows, heifers, and heifer calves, twenty in number, averaged $78.87 per head. Grade bull calves, three in number, averaged $80 per head. Suffolk pigs, twenty-three in number, dropped from the 7th to 10th of April last, averaged as follows:—Nine pairs of pigs averaged per pair, $27.23; five single boar pigs averaged $16.60; one sow in pig, $30. Buck lambs, five in number, lambed from the 21st of March to 19th of April, averaged per head $29.

The sale was strictly a fair one as to bidding, without any underhand arrangement for running up, or whipping the devil around the stump. Many of the animals sold for half their value, but on the whole I was satisfied, as a second annual sale. L. G. Morris.—*Mt. Fordham, June*, 1851.

County Agricultural Fair.—The officers of County Agricultural Societies would oblige us by giving information in regard to their Fairs, so that we can announce time and place in our next number.

Phosphate of Lime.—Prof. **Emmons** has had a quantity of this article, from the quarry at Crown Point, prepared for use. The rock was first pulverized with sulphuric acid, and then dried off by mixing with wood ashes. It is thus brought into a state convenient for application. Prof. E. is desirous that extensive trials should be made with this article during the present season, and has left several barrels with Messrs. **Emery** for distribution. We hope the opportunity will be improved, to give this manure, which has proved of such great value in Europe, a fair test here. We will here correct an error made in a previous notice, in regard to the quantity of phosphate contained in the specimens from Crown Point. Prof. E., as well as Prof. **Norton**, assures us that it contains from *eighty* to *ninety* per cent. *Albany Cultivator.*

The mineral, phosphate of lime, so extensively and profitably used in England as a manure for turneps, contains 50 per cent. phosphate and 12 per cent. carbonate of lime. It is found in the form of hard, gravel-like stones, about the size of an egg. These are ground through several mills, until they are reduced to a fine powder, then mixed by machinery with sulphuric acid, in the proportion of 60 lbs. acid to 100 lbs. of the phosphate, giving a manure sufficiently dry for transportation in bags. It is sold for $25 ter ton. I have seen it applied to *wheat* repeatedly, without the slightest advantage in any instance; but on the other hand, its effects on the turnep are perfectly astonishing, often increasing the crop *four fold.* I have seen instances where its application alone has increased the crop of bulbs from 10 cwt. to 10 tons per acre. Its effect on leguminous plants, clover, beans, peas, and tares, is not so marked, though beneficial. I think it is more than probable it will be of great use in *tobacco* culture, giving the plant a rapid growth at first, and a better chance of escaping the ravages of the fly.

It will at once be seen that the mineral from Crown Point, containing 90 per cent pure phosphate, is much more valuable than the English 50 per cent article, and it is so in not only that it contains more phosphate, but also from the abscence of the 12 per cent carbonate of lime, which in the manufacturing process has to be converted into a sulphate before the acid will act on the phosphate, thus consuming a large amount of the expensive article, sulphuric acid, to produce a cheap one, sulphate of lime, or "plaster." (The English phosphate also contains *iron,* which is deleterious to plants.) In the American article, this expense is avoided, besides having the manure in a more concentrated form for transportation; hence this will be a valuable substance for exportation to the turnep growing country of England, where a considerable quantity has already been sent. But it will also be of great value to American agriculture.—What is to be feared is, that owing to the want of proper machinery, *at first*, it will be imperfectly manufactured, or in other words, the sulphuric acid (the use of which is to convert the insoluble phosphate of lime into a *soluble* superphosphate, by uniting with a portion of the lime, setting at liberty its phosphoric acid, which combining with the remaining phosphate, produces the required *soluble* superphosphate of lime,) will not sufficiently decompose it. And even should it do so, the method adopted of *drying the substance with ashes*, would, through the potash uniting with the acid, to some extent at least, *again decompose the soluble superphosphate, changing it into its original insoluble state*, thus undoing what had been done at considerable expense. So that its application will not be so beneficial this *trial* year as in after years, when a better mode of manufacture is practised.

I write this not to dissuade persons from trying it, but to guard them, in case of its failure, from forming a wrong estimate of its value when properly prepared and rightly applied to the proper crops. A sincere wish for the success of this and every other means for the advancement of agriculture — the great interest of the nation — is my apology for these remarks. **Joseph Harris.**—*Rochester.*

Another Poultry Book.—T. B. **Miner**, author of the "Bee Keeper's Manual," it will be seen by his advertisement, is preparing a new *Poultry Book.* Mr. **Miner** is a close observer, and though he has made some strange statements in regard to the breeding of poultry, in his communications to the agricultural papers, we anticipate an interesting work.

State Agricultural Fair in Vermont.—We have received from A. L. **Bingham** a report of a meeting of the Farmers and Stock-Raisers in Vermont, at Middlebury. Hon. **Frederick Holbrook** was chosen President. The Fair is to be held at Middlebury on the 10th and 11th days of September. Mr. **Bingham** writes us:

"We have made extensive arrangements for the Fair. The plat of ground selected, contains fifteen acres, five acres of which is a most beautiful grove lying on the bank of Orten Creek. There will be the greatest display of Horses and Sheep ever known in America. Mr. D. **Hill**, (owner of Black Hawk,) says, that Black Hawk and fifty of his best colts shall be on the ground, the sight of which will be great to behold."

Stephens' Book of the Farm.—This work, by **Henry Stephens**, with explanatory notes by the late **John P. Skinner**, was first published in this country by **Greely & McElrath**. It is now published by C. M. **Saxton**, bound in cloth, $4: in leather, $6.

The same work has recently been published in numbers, with notes by J. P. **Norton**, by **Leonard, Scott** & Co, of New York, at $5; bound in cloth, $6.

This work cannot be called the *American* farmer's guide, having been written for another country: still, the great principles which ought to guide the farmer, are the same, the world over. We agree with Prof. **Norton**, that "no intelligent farmer can rise from the perusal of these books, or of any considerable portion of them, without feeling that he has gained a vast amount of useful information, and also perceiving that we as an agricultural people have an immense work to do."

Cheap Land.—**Crayton Lewis**, writing from Ulysses, Potter county, Pa., says:

"We have one thing to encourage us: our country is new and bad culture has not done so much toward spoiling our land as it has in some places. It is less than thirty years since the first settlement was made in our county, and it now numbers some 6,000 inhabitants, and there is room for more. We are within eighteen miles of the New York & Erie Rail Road—land from two to three dollars per acre, and the best soil for oats in the United States, (perhaps.) One hundred bushels to the acre have been raised here. Some parts of our county is well covered with pine, and the lumbermen pay a good price for hay and oats. It is also well adapted to grass."

If those dependent upon their daily labor for the support of themselves and families, and oftentimes pent up in uncomfortable apartments, in unhealthy localities in cities, would procure a few acres of land where it can be obtained at such reasonable rates, they would make themselves more independent and useful, and their families more healthy and happy.

IMPROVED TURNIP SEED.—Strap-leaved, Red-top, Flat, Norfolk, Long Tankered, Yellow Stone, Aberdeen, and several other of the most approved kind of turnip seed, just received fresh from England. A. B. ALLEN & CO.
[8-1t] 189 & 191 Water St., New York.

Emery & Co.'s Horse Powers and Threshers.

EMERY & CO.'S Premium Railway Horse Powers and Threshers, which were awarded the first premium at the last State Fair, in competition with many others, for sale at the State Agricultural Warehouse, No. 25 Cliff street, New York.
[6-4t] G. H BARR

NEW YORK STATE FAIR, at Rochester, September 15th, 16th, 17th, 18th, and 19th.—The subscriber has been appointed local Secretary of the New York State Agricultural Society, at Rochester. Any inquiries respecting matters connected with the arrangements of the show grounds for the Fair, may be addressed to me. Persons having articles for exhibiton, who cannot accompany them to Rochester, can consign them to me, and I will see that they are taken proper care of, and the necessary entries made at the business office. JAMES P. FOGG,
Rochester, July, 1851. [8-2t] Local Secretary.

EMERY & CO.'S
NEW YORK STATE AGRICULTURAL SOCIETY'S
FIRST PREMIUM
RAILROAD HORSE POWERS.

THE above justly celebrated Powers, as now made and sold by the subscribers. are offered the public with the assurance that they are all they are represented—they having been very extensively and thoroughly introduced and tested side by side with all the Tread Powers known of note in the country, and been preferred.

The Chairman of the Ag. Society's Committee on Horse Powers, in a communication written some months after the awarding of premiums to the above Horse Power, says: "I spent much time at the late State Fair (Sept. 10th) at Albany in examining the various Horse Powers, viz., Wheeler's, Allen's, Ham's, and Emery & Co.'s, first with the *owners and makers* and heard all they could say, and again in their absence, and the result most fully convinced me that yours was the BEST, and if I wanted one, I would give TWENTY DOLLARS more for yours than for any other on the ground; and as you won your laurels fairly, it is just that you should receive a full reward." He further says, "You know from experience, I have no partiality for your establishment, and as a committee man of said Society for years, I have decided oftener against you than for you; and if others have a better article than you, I would decide in their favor though it ruined your establishment, and, vica versa, hurt whom it may."

With the testimony of such men as the author of the foregoing, which, together with changeable geering, and other important improvements since last season, make it the most *convenient, durable, efficient und economical* Power now made; and the public may rest assured of being furnished by us with a *superior* machine.

Having heretofore been obliged to have a large portion of some parts of our work done by contract, we have felt the inconvenience and want of dependence to be placed upon the quality of materials and workmanship; we have now so extended our facilities as to enable us to make all parts of all our own machines, and cah now assure the public that none but the best work and stock will be offered by us.

The Two Horse Power Thresher and Separator is capable, with three or four men, of threshing from 150 to 200 bushels of wheat or ryè, and the single one from 60 to 100 bush., or double that quantity of oats, per day.

The price for Emery & Co.'s one Horse Power,. . .	$85.00	
do do Thresher and Separator,.	35.00	
do Bands, wrench, oiler and extra pieces,..	5.00	—$125.00
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Price of Emery's Thresher and Cleaner, with bands, wrenches, &c.,.		$75.00
do Saw Mill, complete for use,.		35.00
Price of Grant's Fan Mills, adapted for hand or power from,.		$22.00 to 28.00

Also, Wheeler's Rack and Pinion Power, manufactured by ourselves, and warranted equal to any of the kind in use, (or made and sold by and other manufacturer,) which we sell with a full guarantee of the right of using the same in any territory of the United States, for the following prices:

One Horse Power,.	$75.00
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All the above are subject to the warranty of three months use and trial, and if not satisfactory may be returned and full purchase money refunded.

Individuals wishing Emery & Co.'s Latest Improved Premium Horse Power, will be careful to observe that their name is cast in full on every link of chain and the wheel hub.

For further particulars see Illustrated Catalogue, furnished gratis on application to EMERY & CO.,

Original and sole Proprietors of the Albany Agricultural Works, Warehouse and Seed Store, Nos. 369 and 371 Broadway, Albany, N. Y.

Albany, July, 1851.

ELLWANGER & BARRY, Mount Hope Garden and Nurseries, Rochester. N. Y., will publish on the 1st of August A New Wholesale Price Catalogue, for Fall of 1851, which will offer unusual inducements to purchasers of Nursery Stock in large quantities. Every person who intends purchasing in the ensuing fall, will find it to their advantage (previous to sending their orders elsewhere,) to be in possession of one of these Catalogues, which will be furnished gratis to all post paid applications, or at the office.

Rochester, N. Y., July, 1851.

Fruit and Ornamental Trees, &c.

THE subscribers solicit the attention of Nurserymen, Orchardists, and Amateurs, to their present large and fine stock of Nursery Articles:

Standard Fruit Trees, for Orchards; thrifty, well grown, and handsome, of all the best varieties.

Dwarf Trees, for Gardens. The largest stock in the country, and the most complete.

Dwarf Pear Trees. Our collection consists of well known leading varieties, and numbers more than 150,000 saleable trees. The superiority of these, being grown in the country, over imported trees, is well known to every intelligent cultivator. Nothing, in fact, in this country, can equal our collection of Pear Trees. They can be had from one to four years growth, some of which are now covered with fruit.

Dwarf Apple Trees. We cultivate in large quantities the best and handsomest varieties of apples, on Doucain and Paradise stocks for Dwarfs and Pyramids, and can furnish them in large quantities, from one to two years growth.

Dwarf Cherry Trees. All the leading varieties are cultivated on Mahaleb stocks, extensively. We can furnish by the hundred and thousand, from one to two years growth.

Cherry Currant, the largest variety known. Upwards of 1,000 plants on hand.

English Gooseberries, all the best sorts.

Large Fruited Monthly Raspberry, that gives a crop of fine fruit in the autumn.

Strawberries, all the best sorts.

Ornamental Shade Trees, of good size, for streets, parks, &c., large and well grown.

Choice Trees and Shrubs, for lawns and pleasure grounds, including all the finest, new and rare articles recently introduced.

Hardy Evergreen Trees. Norway Spruce and Balsam Fir, of small size, in large quantities; and a moderate supply of large ones, besides nearly *fifty new and rare Evergreens*, including Deodar Cedar, Cedar of Lebanon, Chili Pine, Cryptomeria or Japan Cedar, Himalayan Spruce, &c., &c.

Roses, Peonies, a large and complete collection, including the finest novelties.

Phloxes. A collection of upwards of 60 varieties, including 30 new varieties imported last spring.

Dahlias. Upwards of 100 select varieties, including the finest English prize flowers of 1849 and 1850.

The following Catalogues, giving full information as regards terms, prices, &c., will be sent gratis to all who apply by post paid letters or at the office.

1st, a General Descriptive Catalogue.
2d, a Wholesale Catalogue,
3d, a Catalogue of Select Green House Plants.
4th, a Special Catalogue of Dahlias and Bedding Plants, for 1851.

ELLWANGER & BARRY,
Mount Hope Garden and Nurseries,
Rochester, N. Y.

Rochester, July, 1851.

Melrose Farm For Sale.
NEAR WASHINGTON CITY, D. C.

THE undersigned offers for sale his farm, lying six miles north of the Capitol, containing one hundred and ninety and one-half acres of land. The house upon it is nearly new, built in modern cottage style, containing thirteen rooms, and ten clothes presses, &c. There is a barn, corn-house, milk-house, and other out-houses upon the farm. The farm is watered by three living spring brooks running thro' it. There are forty acres of meadow land and forty acres of wood land. There are some two thousand peach trees and three hundred apple trees, in bearing condition, besides a large and choice variety of pears, plums, cherries, apricots, nectarines, quinces, grapes, &c., &c., and nearly an acre of strawberries. The fruit alone, now grown upon the farm, will pay the interest on $10,000 per annum. In fact there is not in the country as desirable a farm for sale within an hour's drive of the City of Washington. For a dairy farm it would be unsurpassed.

For particulars, inquire of Dr. Daniel Lee, in charge of the Agricultural Department of the Patent Office, Washington, D. C., or by addressing the undersigned, at Washington City.

Terms of sale, $3,000 down; and balance in annual instalments to suit purchaser. Price, about $40 per acre.

July, 1851. DE WITT C. LAWRENCE.

New Poultry Book.

THE subscriber will soon complete a thorough *practical* work on Poultry, to contain more full information on all points relative to the various new breeds now in the market, than any other work extant. His own experience, and the numerous sources for correct information at his command, he hopes will enable him to produce a work that shall give the most entire satisfaction. He will condense this work in large 18 mo. form, with ample illustrations, containing at least 300 pages, and sell the work at 50 cents per copy!

Gentlemen having any facts of interests to communicate in regard to any particular species or breeds of fowls, and will forward the same to me immediately, post paid, shall receive a copy of the work, post paid. Any one desiring the work will please address me, post paid, *without* a remittance, and when published, it will be forwarded them, post paid. This work will not be for sale by booksellers. Address "T. B. Miner, Clinton, Oneida Co., N. Y."

T. B. MINER,
[Jy] Author of the American Beekeeper's Manual.

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VALUABLE WORKS:

THE Complete Farmer and Rural Economist, and New American Gardener. By T. J Fessenden. In one volume, about 700 pages, cloth gilt, $1.25—mail edition, $1.00.
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"STEPHENS' BOOK OF THE FARM."
COMPLETE GUIDE TO THE FARMER.
With a Portrait of the late J. S. Skinner.

STEPHENS' GREAT WORK ON THE FARM.—A new and complete edition, revised and adapted to the use of Farmers in the United States, by J. S Skinner. This book contains about 1200 pages and embraces *every subject of importance* connected with *Agriculture* in all its branches, with *five hundred illustrations* on wood and steel, making it one of the most attractive and USEFUL books yet offered to the Farmers of the country. It is bound in two volumes octavo, in cloth, only $4; bound in leather, $ 50.

C. M. SAXTON,
8-2t] Agricultural Book Publisher, 152 Fulton St., N. Y.

For Sale.

GIFFORD MORGAN, a very superior bay Stallion, three years old August 26th, sire, General Gifford, (conceded to be the best living Morgan horse) dam, a Morgan built fast trotter, called the Beckwith Mare; see Genesee Farmer, for 1851, p. 152, 53, 44, and Albany Cultivator for 1846, p. 319, 342, 355; do for 1847, p 258.

If not sold before, he will be exhibited at the next State Fair at Rochester, with Zachary Taylor, a bay stud colt of same pedigree one year old June 8th.

Also their dam, again in foal by General Gifford, and any two, (perhaps all,) offered for sale. J DORR.

Scottsville, Monroe county, N. Y., July, 1851.

Strawberry Plants.

EVERY family who have a rod of land, should have a bed of Strawberries. They are the greatest luxuries of the season, both for sick and well. The cultivation is simple, and the plants can be obtained at very little expense. If they are planted the first week in August, they will bear a goodly crop of fruit next year.

The following include the very best under cultivation:

Burr's New Pine—of the highest and most delicious flavor, uniformly, and productive......	37½c.	per doz.	$1.50	per 100
Boston Pine—hardy, and exceedingly productive............	37½c.	"	1 50	"
Hovey's Seedling—a well known magnificent berry...........	37½c.	"	1.50	"
Rival Hudson—valuable for marketing and preserving, hardy and productive...............	25c.	"	1.00	"
Bishop's Orange—productive and fine flavored...............	25c.	"	1.00	"
Large Early Scarlet—an excellent standard sort; one of the earliest....................	25c.	"	1.00	"
Alpine Red and White Monthly..	25c.	"	1.00	"
Alpine Red and White Bush.....	50c.	"	.00	"
British Queen...............	37½c.	"	2.00	"
Columbus....................	25c.	"	1.00	"
Black Prince................	25c.	"	1.00	"
Jenny's Seedling............	25c,	"	1.00	"
Prolific Hautboy............	25c.	"	1.00	"

Also the following fine new varieties, our own seedlings:

Climax Scarlet—light scarlet, rather acid, bears great crops.....	50c.	per doz.	3.00	per 100
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Ellwanger & Barry's No. 1—the highest flavored strawberry under cultivation.............	$1.00	"	4.00	"

For more minute particulars, please refer to our Catalogue, which will be forwarded on receipt of post paid applications.

All post paid orders will receive prompt attention.

ELLWANGER & BARRY,
July, 1851. Mt. Hope Nurseries, Rochester, N. Y.

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ADJOINING the villages of Lakeland and Hermanville, about 48 miles from the cities of New York and Brooklyn, by the Long Island Railroad. The opportunity is now offered to all those who ever wish to obtain land on Long Island, the Ancient "Garden of America," that will probably never occur again, for these lands are the only remaining new lands on the Island, and are equal in quality, when cultivated, to any other land.

The results of cultivation on these Island lands have been so great, so much beyond the expectations of any one, that they are now considered of great value for farms and gardens, and will, in all probability, be all taken up for settlement and occupation, or be held at more than five times their present price. All kinds of produce may now be seen growing there, such as wheat, rye, corn, potatoes, and garden vegetables, with fruits and flowers, in the most luxurious growth, where but a short time since the land was covered with trees and bushes.

The surface of the ground is perfectly beautiful, free from stone or bogs or marshes, and the climate as healthy as can be found in this latitude. The soil is a fine loam, admirably adapted to high cultivation and great crops, and of easy tillage.

Indeed, no New England or Northern New York man can form any adequate idea of the great difference in the labor and strength requisite to cultivate these Island lands, and that required to subdue their own rugged lands, until he has seen or made the trial; and I now offer for sale as handsome land, and intrinsically as valuable, as can be found within fifty miles of the city of New York, in any direction, in lots of five acres or more, for the sum of $25 per acre.

Any person wishing to purchase a five acre lot of good and handsome land, without one foot of water or useless ground on it, can do so by sending $5 as a first payment, and the further sum of $5 a month, until one half is paid, when a warrantee deed and good title will be given, and the remainder part of the purchase money may be paid or secured on the land, to be paid within three or five years, with 6 per cent yearly interest. Larger lots will be sold on the same terms.

The title is perfectly good—I have a history or deduction of the title complete, certified to by legal men of the highest character, which I will send by mail, with maps, pamphlets, and all information, to all purchasers, or those who wish to be informed of these Island lands, by applying to E. H PEAS, of Albany, or CHAS. WOOD, Stationer, 117 John street, N Y. [8-3t]

SUPERIOR SEED WHEAT.—A large assortment of the best varieties of Improved Seed Wheat for sale, among which are Golden Australian, China or Troy, White Flint, Hutchinson's Improved, Soule, and Mediterranean.

A. B. ALLEN & CO.,
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Wayne County Agricultural Warehouse & Seed Store.

E. C. WILDER & CO., Dealers in Hardware, Iron, Stoves, Hydraulic Rams, Lead Pipe, Horse Powers and Separators, Reaping Machines of latest improvement, Eagle Plows, Cast-iron beam do, Vegetable Cutters, Hay Cutters for hand or horse power, and Agricultural Implements of every variety. Paints, Oil, &c.

Palmyra, May, 1851. [5-8t]

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UNRIVALLED Horse Powers of all kinds, guaranteed the best in the United States.

1. The Endless Chain or Railway Power, of our own manufacture, both single or double geered, for one or two horses. These have never been *equalled* by any other manufacturer for lightness in running, strength, durability and economy. They are universally approved wherever they have been tried.

2. The Bogardus Power, for one to four horses. These are compact and wholly of iron, and adapted to all kinds of work.

3. Eddy's circular wrought iron large Cog Wheels, for one to six horses A new and favorite Power.

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I shall at all times have on hand a full stock of Field and Garden Seeds, Guano, and all other Fertilizers in the market, which may be had on the most reasonable terms.

Persons purchasing articles from me may rely upon their giving satisfaction, as I intend keeping only such as I can fully warrant.

GEO. H. BARR,
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VOLUME XII, FOR 1851.

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THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—SEPTEMBER, 1851. NO. 9.

AGRICULTURAL EDUCATION.

WE have thought it a good opportunity to call public attention to the subject of Agricultural Education, by making the extended and exceedingly valuable Report of the Hon. **MARSHALL P. WILDER** and Prof. **HITCHCOCK** to the Legislature of Massachusetts, the basis of some remarks. This document contains 105 well filled pages, devoted mainly to a summary notice of several hundreds of agricultural schools and colleges in Europe, (many of which were visited by Prof. H.) designed to teach both the arts and the sciences that pertain to rural affairs. We regard this report as a valuable contribution to the agricultural literature of this country, and one that will serve to prevent the establishment of inferior schools by State governments.

The Commissioners recommend the following plan for an institution in Massachusetts :

"Let an Agricultural School or College of the superior class be established somewhere in the State, possessed of all the means (teachers, books, apparatus, specimens, farms, &c.,) necessary to give a finished education in the principles and practice of agriculture. Such a school should embrace the following particulars at least :

1. A Professor of Horticulture, Sylviculture, and Rural legislation, who should also be Chairman of the Board of Instructors, or President of the Institution.
2. A Professor of Agriculture.
3. A Professor of Elementary and Agricultural Chemistry.
4. One of Natural History and Geology, who should be curator of the collections.
5. One of Anatomy, Physiology, Veterinary Medicine and Surgery.
6. One of the Mathematics of Agriculture, such as farm accounts, irrigation, draining, leveling, construction of roads, bridges, &c."

President **HITCHCOCK**, who is the author of this plan, truly remarks : "This appears to me the smallest number of Professors with which an institution could be respectable and useful, even at its commencement. The number is *much less* than it is at nearly all the higher agricultural seminaries in Europe. There it ranges from eight to *twenty*."

In Europe, agriculture is esteemed as a high and honorable profession, requiring for its full elucidation, a combination of talent, learning, experience, and science, more than equal to that employed in any other pursuit. Nor is this appreciation of the numerous arts and sciences that belong to agriculture and horticulture at all misplaced or extravagant. When carefully considered, it amounts simply to a reasonable division of labor among a number of competent teachers—each devoting his whole time and energies to a particular department, like that of geology, meteorology, analytical chemistry, botany, comparative anatomy, veterinary surgery, stock breeding and rearing, tillage, dairy husbandry, fruit culture, agricultural mechanics, mathematics, &c. We have no doubt that an institution with twelve professors would be more economical in the long run than one of six. It should have accommodations for 600 students, and furnish every advantage of the best university for the study of science. "Twenty, or even ten years ago," says Prof. H., it would not have answered to propose the introduction of agriculture into our primary schools, or as a department in our academies, or a professorship in our colleges. All this it may be well enough to do now, but something more must be done."

The Report throughout takes enlarged and liberal views, and we are not surprised that the Legislature was not prepared to adopt at once the plan recommended by the Commissioners. It is to be hoped, however, that Mr. **WILDER** and other influential friends of the measure, will not abate their honorable efforts to found the first agricultural college in the Union worthy of the name. New York has had the scheme of establishing an institution of this character under consideration thirty years. When in Albany, in 1822–3, we thought the measure was sure of immediate success ; but experience has proved that nothing is more uncertain than the progress of public sentiment on the subject of agricultural science. We are still indebted to European universities for nearly all that we know in this matter, and may remain in the same humiliating condition for years to come, unless the friends of rural science in different States unite their strength to break the ice, by founding a college in some locality through an appropriation by Congress. What the country most needs at this time is a national institution which shall be to agricultural science what West Point Academy is to military science, with a view to educate young gentlemen for professorships in State colleges. There is now great difficulty in finding men duly qualified in this country to teach the several branches of knowledge which ought to be studied in a college of this kind. This is a serious obstacle in the way of establishing agricultural schools of a high order; and the General Government ought to aid in removing the difficulty.

PRESERVATION OF FRUIT.

Few operations in domestic economy on a farm are more important than the preservation of fruit. In one of his letters written at Paris, Mr. Greeley expresses the opinion that nicely prepared dried peaches would find a ready sale in London and other markets, if due pains were taken to introduce the article to public notice. It has long appeared to us that vastly more money might be realized from apples, peaches, pears, cherries and plums than is now obtained, if a perfect system were adopted in their management. In studying the keeping qualities of apples, Mulder discovered that those least liable to shrivel by the slow evaporation of their fluids, (water,) contained an unusual amount of wax in the cuticle, closing all its pores. This waxy matter performs a similar function on the leaves of many plants, particularly in tropical climates, by checking the too rapid escape of water from their surfaces. In keeping apples and pears, it serves to exclude oxygen from the juices and tissues of the fruit, by the presence of which chemical changes are started, unless the temperature is quite low, which end in fermentation and rot. Eggs are kept from spoiling by filling the pores in their shells with tallow or lard; and many large fruits have been long preserved by a thin covering of beeswax. The principle of excluding atmospheric air, or its oxygen, is the point worthy of attention. In 1848 we put up peaches in Georgia packed in charcoal dust and surrounded with an atmosphere of carbonic acid. A can of these hermetrically sealed was brought to the fair in Buffalo; but, although not decayed, the peaches had undergone such chemical changes as rendered them worthless, and they were not exhibited. This fruit was ripe when put up in July, and after being kept five weeks where the thermometer was from 75 to 88 degrees, it was jolted on a railroad a thousand miles before reaching Buffalo. Of course the test, or trial, was not a fair one; but we are satisfied from other experiments that peaches must be kept at a temperature as low as 60 degrees not to undergo chemical changes when the air is entirely excluded, sufficient to destroy the fine flavor of choice fruits. Prof. Lindley suggests in a late number of the Gardner's Chronicle, the possibility of restoring the flavor or aroma of apples, pears and peaches, by some chemical agents. We have little faith in the success of any attempts of this kind. The preservation of fruits, potatoes and other perishable articles of human food deserves more attention than it has hitherto received in this country. In packing grapes in thoroughly dried saw-dust, care should be taken to procure dust which contains the least volatile matter. Any strongly scented wood, or even feebly scented, will impart more or less of its peculiar aroma to the fruit, and receive that of the fruit in exchange. All gaseous bodies have a natural tendency to mingle and permeate the spaces between the atoms of each. In illustration of this law, a gentleman whose olfactories were extremely sensitive, said that he could smell sixty distinct stinks at one time. This was in a city. When a dog selects the track of his master's iron shod horse, from that of fifty other horses on a stone paved street, as has often been witnessed, proof is exhibited not only of the existence of numerous distinguishable volatile elements, but of the wonderful powers developed in the olfactory nerve of some animals. From experiments which have fallen under our observation, we are inclined to believe that the mean temperature of the earth in the latitude of Rochester and Buffalo at the depth of four or five feet is low enough to arrest all chemical changes in apples and potatoes, properly buried, for an extended and indefinite period, reaching perhaps to centuries. A potato can be buried so deep in the earth in northern latitudes, as neither to germinate nor rot — keeping like the mastodon preserved in a huge cake of ice in the north of Europe. We intend to test this matter in reference to both potatoes and apples in the city of Washington, to preserve them sound till the middle of next June. Potatoes were in the market of the federal metropolis in June of this year at four dollars a bushel; and good fruit is too high and scarce to name. Grapes, peaches, nectarines, cherries, quinces and pears flourish in this climate; but it is a little too warm, except in elevated localities for the perfection of apples. However it is proper to state that Mr. Calvert, of Prince George county, some 18 miles southeast of Washington, who grows fine figs in open grounds, has given us several kinds of winter apples, which were not only highly flavored, rich and crisp, but more free from that wood-like tissue and toughness, peculiar to apples grown at the south.

Editorial Correspondence.

P. BARRY'S LETTERS FROM EUROPE AND THE WORLD'S FAIR.

Paris, July 1st, 1851.

The journey from London to Paris is now performed in 12 hours; and yet what a change it gives the traveler in climate, country and people. When I left London I was fairly sickened with dull, cloudy and rainy weather. On my arrival here I was ushered into a most delightful American June—the sun bright and warm, and the atmosphere clear and pure. For 12 days we have scarcely seen a cloud, and the temperature has been about the same as in New York at the same season. To-day it rains, and I am compelled to stay in the house. I am glad of the opportunity it gives me of rendering a short account of myself. I must, first of all, say something about Paris; for you know it is said that "Paris is France." I do not however admit this. Great and comprehensive as is Paris, it is not France. Those who would know the French people correctly, either in a moral, social, or industrial point of view, must get outside the walls into the country and country towns. They must enter the fields and gardens, the factories and work shops, and mingle with the family. Foreigners are very apt to come here, take lodgings at a hotel, visit the theatres, restaurants, public promenades, and exhibitions, and after spending a few weeks in that way, they sit down and write to their friends that the French are a people that love luxury and idleness, that they have no energy, no industry, are dissolute in their habits, vain, frivolous, &c., &c. Now nothing can be more unjust than this, for three-fourths of all the gay, frivolous, dissipated, pleasure seeking people we meet in all public promenades and places of amusement, are foreigners from all parts of the world. They come here to spend their money, and the French people are most industriously at work catering for their tastes and pleasures. I do not mean to say that Parisians themselves are exempt from idlers, vain and dissolute as can be found elsewhere. How could it be otherwise in a city with about a *million and a half* of inhabitants suffering from an incessant influx of the more dissipated class of persons from every country on the globe. It only strikes me as a sort of miracle that so much good order, quiet and decorum, public and private, can exist under such a state of things. During all the time I have passed here I have heard of no pockets being picked — I have seen no street fights, no collisions between drivers of public conveyances on their narrow thronged streets; I have seen no drunkards or beggars in the streets, and but one person taken along to the watch house for an attempted theft. Yet goods of all sorts are strewed about the doors and windows, outside in the greatest profusion, as if to tempt and trap the evil disposed. Most of the clubs and secret political organizations are headed by vagabond radicals from other countries who have had to fly their own homes for political or other crimes. The other day a club was broken up by the police, and it was ascertained that very few were Parisians, and they were only the dupes of the other designing knaves who were filching a sort of contraband living out of their earnings. Yet we are apt to throw all these things on the Frenchmens' shoulders. But it is not only idlers and pleasure-seekers that flock to Paris. It is equally the resort of literary and scientific men of all countries, of students in every profession, theology, medicine, surgery, music, painting, &c. It is the resort of merchants from all countries, who come to purchase all the more elegant articles that embellish life. Even the members of our own humble profession cannot afford to stay away. On my ramble I have met with the most renowned English cultivators making their annual tour among the unrivalled Rose Gardens of France, to select new varieties, and pick up new hints upon culture, as I am doing. The truth is, in all the arts of life that depend upon taste, as well as in all the higher departments of science, France, (Paris, if you please,) is the head quarters. I cannot begin to describe the multitude of interesting public objects to any satisfactory extent; but I will name over a few of those in which I feel the greatest interest.

In the first place, the public gardens—my taste runs, as you know, in that direction, and I therefore give them the precedence in my notice. The most complete is the *Jardin des Plantes*, (the Garden of Plants,) one of the most useful and best conducted of the kind in the world. Here the student of nature, whether in the department of animal, vegetable, or mineral, finds a field for weeks or even months of examination. The department of culinary vegetables contains carefully arranged, labelled, and cultivated in the best manner, all the varieties of the different vegetables. For instance, there are beds of lettuce, of cabbage, of carrots, of beets, of onions, of turneps, &c., with 10, 15 or 20, and may be more varieties of each. Here the market gardeners come to study the character and qualities of each, and ascertain what will best suit their particular purposes. Next we come to *Medicinal* plants, an assemblage of all the most important species used for medicinal purposes. Again, we come to the *grasses*, where we have a complete collection of all species that can be of service to the agriculturist under any circumstances. Further in we come to a flower garden, where all sorts of flowers suitable for the embellishment of of gardens are tested and grown. In one department annuals, in another biennials and perennials, and in another bulbs and so on. Leaving the plants, we come to the *arboretum*, a collection of all the finer species of evergreens and deciduous trees that are suitable for this climate in the open air. Here we find magnificient specimens of cedar of Lebanon, and in fact all the more rare and beautiful trees. Now we have come upon the *Fruit Garden*, a collection of the most beautiful fruit trees that exist in the world. The pear trees especially are now everywhere spoken of. They are trained as pyramids, chiefly, and the most critical eye cannot discover a blemish in their symmetry. Mr. Cappe, the conductor of this department, is a plain old gardener, but highly intelligent and skillful, as his work shows. He lives in a snug cottage within his own department, and has occupied his present situation for 15 years. He was formerly a private gardener of a gentleman in the interior. He has now a son about 20 years of age, who bids fair to be an equally skillful arboriculturist with his father. He partakes of his enthusiasm and already evinces a pretty thorough knowledge of culture. I spent a few hours with them very pleasantly. By the way, this reminds me of Mr. Downing's statement in regard to the *Louise Bonne de Jersey* and *Louise Bonne d'Avranche.* — If I remember right, Mr. D. said he saw these side by side, and that they were different. I thought at the time that he was mistaken, and I believe I said so in the Farmer. I asked Mr. Cappe to show me the trees, but he told me that they were identical in all places. He pointed out to me the *Louise de Prusse* and *Louise Bonne de Jersey* growing contiguous to one another, but they are quite distinct.

From the fruit department we go to the green and hot houses. Here we see some magnificent palms and other rare, curious, and beautiful species. The conductor of this beautiful department is Mr. Newman, an accomplished cultivator, and besides, the largest gardener I have happened to meet; I should think he would weigh full 300 lbs. It is quite enough for him to see the ground without reaching it. I mention this because it is a rarity for men whose occupations are so active, to attain such a corpulency. Besides all these departments there is the *Menagerie*, a very extensive collection of living animals of almost every species, all inclosed in separate apartments, where they enjoy the open air under circumstances best adapted to their nature. This is the favorite department with the great bulk of visitors who frequent the garden. At all hours of the day, the monkeys in their great iron cage are out yelling and performing their amusing pranks to a large audience. So are the elephants and bears. The collection of wild and domestic fowls is very large and interesting. Every part of the world has sent a contribution. Then from the living specimens we may enter the cabinet of comparative anatomy. Here we can study the forms and structures of all sorts of animals of the various races of human as well as of the brute species. This collection comprises over 15,000 anatomical preparations, all arranged and classed in 14 or 15 different apartments. This is considered the richest collection in Europe.

Then there are great collections of minerals, classed under the head of stones, inflammable materials and mineral and geological specimens; the different layers of earths and fossils classed separately. Of the two collections there are upwards of 60,000 specimens. Then there is a gallery of botany containing specimens of more than 50,000 species. Of dried plants there are about 300,000 specimens; and of woods, fruits, and seeds, about 5,000. All these together constitute what is called the museum of natural history, and what an almost boundless source of information it is to the student of nature. I turn from it only with the regret that I am permitted but to glance at its treasures.

But I have said nothing of the library, it is worthy of all the rest. It contains the most interesting works upon natural history and travels to upwards of 30,000 volumes, besides upwards of 100 magnificient folio volumes of drawings of plants and animals.

The whole extent of the garden is about 40 or 50 acres, situated eligibly on the banks of the Seine, and arranged with great skill and taste. It is only too small. On all sides are beautiful cool shaded arenas, some composed of lindens, some of chestnuts, some of maples, some ornamented by their flowers and others by their foliage or fruits. These are intended to show the adaptability of various species for the formation of avenues. The same experiments are made with all the hedge plants. Around the fruit garden are fine examples. I noted among others a piece of Buckthorn about 5 feet high, and 5 feet wide, cut perpendicular on the sides and flat on the top. It was as dense as it possibly could be. This is the form of all the other hedges. In the fruit department all methods of grafting and budding and pruning and training are practiced for experiment, and it is very interesting to see the results. The support of this institution costs annually about 500,000 francs or $100.000. There are six professors. Would any one say that this $100,000 is not well spent. Only think how many hundred thousand people derive instruction and recreation here annually, and put that against the expense. It is now about 225 years since this institution was founded, under LOUIS XIII. A cedar of Lebanon, the noblest specimen in the arboretum, was planted by JASSIEU, and is now upwards of 200 years old, a majestic old tree in full health and vigor. It is interesting to think as I did when sitting in the shadow of this venerable cedar, that in all the revolutions and changes that have happened to the government of France in two centuries, that this garden has always been spared; and not only that, but nursed and improved with great care. It also increases ones interest in it to think how many great names have been connected with it and contributed toward its support. Among these we think first of JASSIEU, BUFFON, and CURIER, whose names are familiar to all students and readers of natural history over the world. But I cannot say more at present of this noble institution, and can only wish we had one like it in America.

Next in point of intesest to me has been the *Palace* and *Garden of the Luxembourg*. Here we have magnificent examples of architecture and gardening, with one of the finest galleries of paintings in existence. The palace was erected in 1615 by *Maria de Medicis*, regent of France after the assassination of HENRY IV. It is a magnificent building, presenting in its different parts different styles of architecture. It is now thrown open to the public, and its luxurious apartments and splendid paintings are daily visited by hundreds of people and students, both male and female, constantly there, copying from the old masterpieces. In the garden we have avenues of lindens, horse chestnuts, maples, tulip trees, &c., that surpass all others I have seen. The great avenue is about half a mile long, composed of 6 rows of trees, which make a central wide avenue and two side ones. The central avenue is of lindens, and the others of horse chestnuts, and outside of all, enclosing the avenue, are fine thorn hedges. The trees are pruned into a shape that corresponds with the artistic style in which the grounds are laid out. The trunks 10 feet high are branchless, 10 feet above that the branches are cut so as to form a smooth wall, the tops are then above that allowed to meet so that they form an arch,[*] and so all the avenues here are managed, and although the natural form of the tree is destroyed, yet the avenue, which is the object, is complete and *beautiful*. Then there is an orange garden, a charming little spot of ground, about an acre, of a circular form, a bit of lawn with a fountain in the centre, edged with flowers, around that a wide walk in which the orange trees are arranged in rows in tubs. These trees are ten feet high, with heads as round as a ball, and are now in full bloom, loading the air in all directions with their perfume. This orange garden is completed with a row of statuary all around in white marble; among other pieces I noted *Marie Stuart, St. Genevieve, Duchess d' Orleans. Jeanne Hachette*, &c. There are many fine avenues of minor dimensions. I observed one of pawlonias, and another of scarlet horse chestnuts. There are many flower gardens and borders of shrubs, a botanic garden of the school of medicine, and a nursery and fruit garden. The latter are under the care of Mr. HARDY, who is the professor of arboriculture, and who gives two public courses of instruction during the year. His trees are admirably conducted. I saw splendid pyramids of *pears, apples, plums*, and *cherries*, also fine vases, espaliers, dwarfs, pentagons, &c. The trees and the ground are all kept in the finest condition, and afford great gratification to visitors. One might spend several days with pleasure and profit in the Garden and Palace of Luxembourg.

Next in point of interest comes the Palace and Garden of the Tuilleries, situated on the river bank.[†] The palace is a magnificent structure nearly 400 years old, (a part of it.) It has been enlarged and improved by successive sovereigns and rulers of France. It is chiefly occupied now with the exhibition of paintings and sculpture. The garden is composed of I should say 30 or 40 acres of land, laid out in the best possible manner for public gratification and comfort, to which it is wholly devoted — long avenues of trees formed into bowers, into which the sun cannot enter, charming flower gardens with fountains, avenues of oranges and pomegranates in boxes, comfortable seats, and at night all brilliantly illuminated with gas. Out of the Tuilleries you pass into the *Champs d' Elysee*, (Elysian Field,) the great fashionable promenade and drive of the whole fashion of Paris. In this neighborhood are assembled everything that can amuse. Close to the Tuilleries is the *Louvre*, a magnificient palace, famous for its immense collections or museum of paintings and sculpture. Here every nation is represented, and you can examine successively the great works of Italy, Spain, Belgium, France, ancient and modern, also ancient Grecian and Egyptian works of art. This is continually a great resort of strangers.

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[*] This is called pruning *en berceau*.

[†] The river Seine runs through the centre of the City.

The *Palais Royal*, now *Palais Nationale*, or National palace, is literally a palace of shop keepers and restaurants. It is an immense building presenting a series of arcades and piazzas, through which it would take one an hour to walk. These arcades and piazzas are occupied with shops, where all the most brilliant goods are sold and the most fashionable restaurants are kept. It is a gay and a thronged and busy place, day and evening. The building forms a sort of hollow square, in the centre of which is a pretty garden with a fountain, and on either side linden avenues or promenades. Now, in the summer evenings, this place is absolutely crowded, and when lighted up brilliantly with gas, through the garden and in the long ranges of shops, a fountain in the centre gushing and sparkling, it is really a beautiful scene, and no wonder so many are attracted to it. Ices and other refreshments are carried about in all directions by a swarm of waiters from the various restaurants, and friends are on all sides meeting and conversing on the topics of the day, &c.

The *Palais Elysee* is situated on the Champs d' Elysee, already alluded to as the fashionable resort. It is now the residence of the President. These are the principal public edifices to which fine gardens are attached. They are the recreating thoroughfares where the student and the artisan, confined all day in a close room, can go on an evening or on a Sunday, and enjoy a stroll among the trees and flowers. What luxury, and what a blessing for so large a city, that such pleasure and health giving institutions are scattered through it!

In this connection I must mention the cemetries, because they are much frequented. There are three fine ones, the *Pere la Chaise*, the *Montmatre*, and *Mount Parnassus*. The first is the finest, and is probably the most interesting in the world. It is a beautiful illustration of the people's taste, and the homage they pay to the memory of departed friends. It is full of beautiful cypresses, marble tombs and vaults, and little chapels, in which fresh flowers are daily placed. A portion of the ground, like our Mt. Hope, is well elevated and gives a magnificient prospect, and as we pass around we come upon the tombs of some illustrious persons, who have figured largely in the pages of history. It is a charming place in which to dream away a day.

Then in every corner of Paris we find institutions that not only from their character but from their architecture and historical recollections, are of great interest to strangers. Such are the churches both ancient and modern, *Notre Dame*, *St. Sulpice*, *St. Roch*, *Madelaine*, and twenty others, in which are different styles of architecture carried out in all their purity, with the finest examples of stained glass, painting, sculpture, &c., and in which every day are performances of sacred music, such as we can never hear in America. Last Sunday, at St. Roch, in addition to the organ and choir, there was a band of 50 instruments, and the performance was such as I can never forget. Besides the churches there are the buildings devoted to a multitude of charitable, literary and scientific institutions. The number of these is truly astonishing. To give you some idea of these things I shall name a few of the more prominent.— The National Library, founded nearly 500 years ago, occupies a great building. It contains about 1,500,000 volumes, 100,000 volumes of manuscript, 400,000 medals, 1,000,000 engravings, 300,000 maps, &c. To the library is attached a school for the living oriental languages. There are more than 20 other extensive libraries. There are societies for the promotion of every branch of human learning, art, and science; charitable institutions, to meet the misfortunes of all classes of society. With all these attractions for all classes of people, it is no wonder that it should be looked upon as the great capital of the world. I met a gentleman from the United States a few days ago, who remarked that for those who did not wish to accumulate wealth it was the only place in the world worth living in. A great consideration, too, is that living is cheap and good. In the art of cooking, which has considerable influence on good living, the French can teach the world. The poorest peasant can make a comfortable and healthy meal of what our laborers could not use. Their living cost but little, and they seldom employ a physician. This reminds me of the MARKETS OF PARIS. In regard to meat, beef and mutton is far inferior, generally speaking, to that of London. I do not believe that in the world there is to be found such meat markets as those of London; but in London meat is a staple article of food, here it is not so. The fruit and vegetables of Paris are exceedingly fine. At this moment there is a profusion of strawberries of the finest quality; *Elton*, *British Queen*, *Pine Apple*, *Keen's Seedling*, and the *Alpines*, are the principal sorts. The last are the most plentiful, grown in great abundance. British Queen, extraordinary for size and beauty, and it commands the higest price. Elton comes next in rank. *Melons* fine—*very fine*—are abundant at two to three francs apiece. *Radishes* delicious,—a small, early variety, now in market, used for forcing, is so tender that it melts in the mouth. It is oval, about as large as a lady's thimble, and of a pink color. I wonder why it has not found its way to our gardens. I am not particularly fond of radishes, but I should feel ashamed to tell how many I have eaten of them every day. *Lettuce* and *chicory* so tender that they can hardly sustain their own weight. They have a little early, short *carrot*, different from our short horn, the best I have ever tasted, as they serve it up in soups, and on a-la-mode beef it is delicious. I am determined to introduce it. *Large early apricots* are abundant. *Madelaine pears* appeared a few days ago, but they are from the south. *Potatoes* are very fine. *Currants* and *gooseberries* abundant and cheap. *May Duke* is about the only sort of cherry to be found in market, and in most parts of the country it and the *Montmorency*, (Early Richmond,) are the only sorts grown to any extent. But the May Dukes are very fine, large, and with less acid than with us generally.

The Market Gardens of Paris.—The city is surrounded on all sides with small market gardens, both without and within the walls, and it has given me great pleasure to examine their operations. When I found how superior their productions were, I felt a curiosity to know more about their culture, and I strolled out one day to Montreuil, some 4 or 5 miles from town, to see the famous peach gardens, and on my way I visited the best market gardens. The whole way to Montreuil is a series of them. I very soon found the secret, if secret it be, of their success. In the first place the ground is made 2 or 3 feet deep and as rich as it needs be. In the next place they provide *abundance of water*. In nearly every garden exceeding half an acre in extent, I found a horse pumping water. It is forced into a reservoir so elevated that it flows in pipes through all parts of the garden, into tanks, when it is at the hand of the work, men to apply it. That horse pumps all day, and a certain number of men, 4 or 5 on a two acre garden, water all day, not in the morning and evening, but all day, and they do not sprinkle it on, but absolutely deluge every thing with it. This with the rich, deep ground and a hot sun, gives the plants a tropical climate that makes them grow like mushrooms. If a day happens to be cool, they have large bell glasses, 18 inches to two feet in diameter, enough to cover the whole garden if necessary. Melons are a great culture and well understood by the French gardeners. But this watering process is universal. As soon as there is the least deficiency of moisture, on goes the water. All the parks and gardens of Paris, all the cemetries, &c., are drenched daily. No plant is allowed to suffer. The gardeners never say my plants are suffering from the want of rain. They spare neither labor nor expense. I have heard it said that the French were not an industrious people; but I have never seen any people more so. At four o'clock in the morning these market gardeners are in town with their products. Some have wagons or carts. Some have baskets that they put on an ass's back. I have seen three or four large baskets on each side of the back of an ass, and a woman mounted on the top. In most cases the women do the marketing, for the men have to attend to the garden. It is astonishing how far these people will walk, and what a load they will carry. I have seen in the country towns both men and women come into market with an immense load of vegetables, from a distance of 6 or 7 miles. In all the gardens and nurseries the men work from 4 o'clock in the morning till 8 at night, having half an hour for breakfast and an hour for dinner, and they work hard with heavy instrments. They are paid 40 cts., that is 2 francs per day. Talk about being lazy! every where the farm laborers are in the field as soon as they can see to work; but this brings me to French farming, of which I intended to say something.

In agricultural implements the French are greatly behind, in most parts of the country. The live stock also is very inferior. The land is too much divided into small lots. Wherever this is the case, farming must be poor, yet I have seen as fine crops of wheat, grass, and clover, as can be produced any where. — The wheat crop this season is good all through France. I find everywhere a spirit of improvement. At the exhibition I observed Frenchmen very active in examining and in buying implements, and in taking note of every improvement that they met with. In much of the country I have passed through, the land is owned by persons who reside in small villages. There is no division fences, nor any regularity in the size and outlines of the lots. This gives the country the appearance of a piece of patch work, for one man grows one crop and his neighbor a different one; though a great portion is occupied with a sort of grape, small black, similar to the Black Clusters, from which the common red wine, "*vin ordinaire*" is made, and there is so much of this used that it is a profitable crop. It is the common beverage of all the working and middle classes, farmers, &c. A bottle in Paris is charged at a franc in the hotels, in the wine stores about half that, and in the country 50 or 100 miles from Paris, it is not worth more than 5 cts. The working people use it wholly instead of coffee and tea, and very few think of drinking water. At the dinner table of the best hotels and in the wealthy private families, it is used with seltz or soda water. The French people consume large quantities of bread (which is excellent) and vegetables, and but little butter or meat; soups are invariably used at breakfast and dinner. The mode of living is wonderfully different from ours, and I must add, on the whole much better; laborers eat three times a day as with us, but proprietors only twice — breakfast at 9 or 10 o'clock, and dinner at 4 or 5, and no more. Johny Bull, on the contrary, eats five times, and the Frenchman wonders how he can attend to any business, or how he can live any way. I am well pleased with French living and French society, and if my knowledge of the French language were more perfect I should enjoy it still more; but what a misery it is to come here without at least *some* knowledge of the language. I have seen many such instances and heard of many. And without hiring an interpreter, which is expensive and unpleasent, no information can be collected, no business accomplished, no pleasure taken, you cannot go a step alone. There are many Americans here now. Most of those who came to attend the exhibition at London, stay but a short time, and then make their way here. Mr. and Mrs. Batsham are here at present; I have had the pleasure of seeing them frequently. They are both actively engaged in seeing the lions of Paris, and will give an interesting report to their paper. I will finish my journey in a week or so and return to England, when I shall soon leave for home. P. B.

* * *

Caen, France, July 7th, 1851.

In my last letter I gave you some items respecting Paris and its vicinity, and a portion of the country lying southwest of Paris on the Seine and Oise, Loiret, Loire and Cher, Indre and Loire, and Maine and Loire. In this section of the country the climate is mild, and the grape, as I have said before, is the *principal* culture. The whole country looks like a garden it is so divided and subdivided into small patches. I intend to say something about their mode of culture of the grape. It is exceedingly simple. The vines are planted in rows three or four feet apart, and the plants stand about three feet apart in the rows, in some cases more. They are close pruned every winter and kept low. The stakes for their support are about four feet high. The summer culture consists simply in keeping the ground clean as we do our corn fields, and in tying up the growing shoots as they require. The work is mostly performed by women, and I was delighted with their expertness in arranging and tying up the shoots. They are out at it by 4 o'clock in the morning, walk 2 or 3, perhaps 4 miles from the village, take their bottle of *vin ordinaire* and loaf of bread, and stay till sun down, when they return with a heavy back load of vegetables or fruits. These women, by the way, have no regard for their complexion. They eschew all such things as sun bonnets. The hair is combed smoothly back and a small tight cap or bandage keeps it there. The face is wholly exposed, and you may be assured it is "done brown." And this is the practice even with the better class of country people, the wives and daughters of wealthy farmers. Last Sunday I spent in a small country town, and among the hundreds, I might say thousands whom I saw at church and in the streets, there were not a dozen who wore bonnets of any kind, but the Sunday caps—how shall I describe them? Some are certainly two feet high, fitting closely around the forehead and ascending like a funnel, crowned by a circular or semicircular piece that inclines forward, behind there are two streamers that hang down upon the shoulders. A broad black velvet band attached to each side, and fitting under the chin, retains it in its proper position, and sets off the whole to advantage. Some of these I observed were made of the finest muslin and lace, and were worn by elegantly dressed country ladies to such advantage that I really admired them. Nothing in the Chinese or Turkish costume strikes me as more remarkable than these caps. But these things I ought not to mention, they are quite foreign to my purpose in writing; but this is not the first time that ladies and their affairs have diverted me from my purpose.

Since my last letter my travels have been through Normandy, northwest of Paris, and between that city and the English Channel, through the districts of *Seine* and *Oise*, *Eure*, *Orne* and *Calvados*, a region which sustains the reputation of being one of the best, as regards agriculture, in France. It is entierly different in its appearance, and in its culture and productions, from the Loire region. It very much resembles England, except that in many places it has more forest, and the land is divided into smaller allotments. The vine is not cultivated at all except on walls in the garden, but apples for cider are extensively grown. In some localities one would suppose the whole country an orchard. Norman cider is quite celebrated. It is the common beverage here as the common wine is in other localities. The country is beautiful. The roads are as well kept as labor can make them, every inch over which I have traveled is like a race course. They are divided into short sections, each of which is placed under the care of one person who sees that there is not a blemish to mar their perfection. What a comfort to travel over such roads! There every house has a garden, not in name but in reality, filled in every corner with the best productions, and every wall of the house, and every foot of the garden fences is festooned with vines or covered with espalier trees. But wherever we go in France we find that passion for gardening prevails both in town and country. I stopped at a village hotel the other day, which had a small court about 25 or 30 feet square, and this instead of being filled up, as is not unusual elsewhere, with empty barrels, boxes, &c., it was converted into a little floral paradise. In the centre was a circular bed, containing 30 rose trees of the best varieties known, in the highest state of perfection. Around the sides were little rustic arbors and coffee rooms, covered with festoons of roses. Mignonette in profusion was filling the air with its perfume. In this little spot, which to most people would be quite useless, I counted up nearly all the roses that are pre-eminently fine. The landlord was the gardener, and a good one. I found the same sort of taste in Paris. In the courts of the hotels, where there was no possibility of cultivating plants in the ground, groups of pot plants were assembled around, which made a garden of it. Why cannot our hotel keepers give some attention to this matter? They generally have leisure, and it could not fail to make their houses more agreeable and attractive, and give them reputation as people of refined taste. The weary traveler who has to spend an hour, or a day waiting about a hotel, finds it more agreeable to sit in a pleasant garden bower, than in either a bar room or a parlor.

In Normandy, as with us, wheat is one of the staple productions. The crop this season is very fine. I am told however that southward there is a partial failure, which begins to be already speculated upon. There is much more oats grown than with us, and also barley, but they have no Indian Corn. Vetches are cultivated extensively, and fed green to horses, cattle, and sheep. The crop is now all cut, and the ground is plowed, and in the course of preparation for a crop of turpeps. I see both lime and manure spread on all the fields, and the ground being pretty well cleaned with the vetches gives a good crop of turneps. Turnep seed is grown extensively. I noticed hundreds of acres of it lying cut. Threshing had commenced. This is done by the hand flails in the field. Wheat usually succeeds a crop of potatoes or turneps, for which the ground has been manured. — The implements are rather, as it seems to me, behind the age. The plow is a curious affair, with a straight beam and two large wheels, say 3 feet in diameter. I have a figure which will be given hereafter, in connection with others. The plowing generally is very light, in rare cases has anything like subsoil plowing been attempted.

The animal stock is pretty fair, a great number of the best breeds of cattle and sheep have been recently introduced, and the horses, the pure blooded French horses, are as fine work animals as are in the world—large, powerful, active, and tractable. The better class of Canadian horses show their descent, but they are wofully degenerated in Canada. Here they are square built, with fine, straight, well proportioned, powerful limbs. It is quite rare to see one of them knee sprung or spavined, although they are loaded and drove unsparingly. They are admirably trained. On the highways, I have often seen mere boys driving four of them at tandem, before a heavy load, without a rein, depending wholly on the whip, which, in a Frenchman's hands, means something. In the crowded cities, too, where the streets are narrow, you will see three, four, or six, as it happens, attached to an enormous load, and whirling it around short corners and through narrow lanes, at a speed really frightful, but always in perfect safety, and *no reins*, the word and the whip only. They are all stallions too, and as fat as it is possible to make them. We have found it impossible to get a man who could drive safely two such horses, with the best of reins and tackling. At the changes of the diligence horses at the stations, the whole four or six are turned out of the stable together like sheep. I wish sometimes that our teamsters could see a little of their management. The government is doing much for the improvement of domestic animals. Here in Normandy, within a few miles of *Argentan*, it has a large and fine establishment where all the best breeds of horses, cows, and other animals, are introduced for the benefit of the surrounding country. The domain (Duaro) comprises a large tract of beautiful land; buildings are fitted up in the most commodious manner for all the different races, ages, &c. It has a lecture room with library and anatomical subjects to illustrate the physiology of animals and treatment of diseases. — There is for every department a professor or head. A blacksmith shop is attached, and the most complete

I have seen, where all the shoes are made, and every thing done pertaining to horse shoeing. There is one person who breaks and trains horses and teaches riding, &c. For this purpose they have a very large building, and a beautiful course. They have at present in training, horses for every purpose, running, trotting, leaping, &c., &c. There are in all about 400 persons employed, making quite a village. A large number of the horses were out at the various summer stations, and many of the cattle were at a great distance in the pasture, so that I did not see their best specimens, but I saw that it was an excellent institution, though like all others sustained by government, conducted not on very rigid principles of economy.

Rye is now being harvested. Hay is nearly all in, and wheat to all appearances will not be fit to cut short of two weeks hence. The season is not much different from ours. I observe everywhere that the scythe snath in use here is quite *straight*, yet they seem to work easily, and their meadows are admirably cut. I intend to say something of Caen, a very interesting old town, but I cannot now. Its ancient buildings, its history, its present condition, &c., are worthy of notice. P. B.

P. S. As regards politics, at present there is a perfect calm in France. The only topics that elicit even newspaper discussion, are the tariff and the revision of the constitution; and judging from all appearances, neither will at this time be altered. The more radical or progressive portion of the assembly have a strong tendency to free trade, and have, as you see by the papers, recently brought in a measure reducing and greatly modifying duties, and in fact declare themselves in favor of absolute freedom.—M. Thiers, the well known statesman and historian, has made himself the champion of the opposition to to it, and declares and has by figures and eloquence endeavoured to prove that without protection France would be ruined. In reading his arguments I was strongly reminded of our tariff agitation. I shall express no opinion on the subject, but this much I know, the French people bear an onerous burden in the form of duties, the land absolutely swarms with officers of the law, whose duty it is to prevent any freedom of trade. A lady cannot go to Paris from a country town, and do her shopping, buy a new hat, &c., without having it opened and examined most minutely perhaps half a dozen times before she gets home. A man cannot drive his carriage into town without having it searched from top to bottom, and every thing in it by an officer of the law. These severe and minute restrictions on trade, and the paltry exactness in regard to passports are greviously annoying. I express no opinion as to their necessity and propriety. P. B.

CATTLE SHOW OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, HELD AT WINDSOR PARK, ON THE 16th. 17th & 18th OF JULY.

No previous exhibition of this kind ever held in England, attracted so much attention as this. Among the visitors to the great exhibition in Hyde Park, it was a constant subject of conversation for a month or more previous to the day on which it was held.—English agriculturists from Prince Albert down, appeared to be animated with the common desire to make it remarkable in its way, a fit accompaniment to the show of all nations in the chrystal palace, and I believe they have succeeded. A collection of more perfect animals, or a more judicious, well conceived and satisfactory arrangement, has not, I venture to say, been seen in any country. In all England, abounding as it does in magnificent parks, no more beautiful spot could have been selected than at Windsor, under the Castle walls, on a velvet lawn, and in the midst of park scenery that alone is worth a journey of hundreds of miles to see. Windsor is but an hour's ride from London, and the fare during the show was about 25 cts., hence almost every stranger in London attended, and the whole number of visitors was immense. The first day the price of admission was fixed at 5*s.* sterling, ($1.25.) The second day 2*s.* 6*d.*, (50 cts.) The third 1*s.*, (25 cts.)

Apprehending a rush, I chose the first day, in order to enjoy the best opportunity of inspecting the animals. And I afterwards had reason to be glad that I did so, for I understood that the second and third days were by no means agreeable. Those who were present on the first day were exclusively persons who felt a direct interest in the show. Agriculturists from different parts of Great Britain, France, Belgium &c., of foreigners by far the greater number were French, and indeed at one time of the day one would have supposed that they composed half the number of visitors. The interest manifested by the French here as well as in the agricultural department of the great exhibiton, convinces me that they are quite alive to improvement in every thing pertaining to agriculture.

The cattle sheds were the most convenient and tasteful, and at the same time the most comfortable for the animals that I have seen. Opposite the wide gate through which the animals were admitted, was an avenue 50 feet wide, on each side of which the sheds were arranged in rows, with passages 30 feet wide between each row. Thus giving visitors free access to the animals on both sides. The sheds were 15 feet wide, span roofed, the frame work made of light timber, and the roof covered with common cotton cloth. The two sides were open. The sheds were divided into stalls of 12 feet long, and the animals were tied up as in stables, well furnished with litter. Carts of dry and green fodder and water were kept moving about all day to supply every want in the way of food and drink. These tasteful covered sheds I consider a great improvement in shows of this kind over the dismal looking open "pens" in which we too frequently see the cattle huddled at our shows, and not only that, but they give to persons who wish to examine them a much better opportunity; for here we could enter, pass around the animals, and handle them if we choose, from head to tail, without the least difficulty. These sheds, too, are as cheap and simple in their construction as any thing can be. If I were an exhibitor of animals I would cheerfully pay something extra, if necessary, to secure such an arrangement as this, rather than put up with the usual accomodations at our shows.—Every shed was lettered, one A, another B, &c., and each one devoted to a certain breed of animals, and a certain class depending on age, &c., and the breed and class of each was also placed conspicuously on each shed or department. This enabled visitors to make their examinations and comparisons with great facility. A complete printed catalogue of every animal presented was prepared and sold to visitors at the entrance gate on the first morning. In the catalogue the animals were classed thus—commence first with Short Horn Cattle:

Class 1, Bulls calved previous to January, 1849. Class 2, Bulls calved since January, 1849. Class 3, Cows in milk or in calf. Class 4, Heifers in calf, not exceeding 3 years. Class 5, Yearling heifers.

Herefords, Devons, Long Horns, Channel Islands, (Jersey and Guernsey) Sussex, Scotch horned, Scotch polled, Welsh, Irish, &c., were all classed in the same way as the Short Horns.

Horses were arranged in eight classes, thus :

Class 1, Stallions of any age, for agricultural purposes. Class 2, Stallions, 2 years. Class 3, Dray Stallions. Class 4, Hunter Stallions. Class 5, Carriage Stallions. Class 6, Roadster Stallions.—Class 7, Mares and foals. Class 8, Fillies, 2 years old.

Sheep were first arranged according to breed, as Leicesters, South Downs, Long Wools, and Mountain Sheep, and each breed into 3 classes, thus:

Class 1, Shearling Rams. Class 2, Rams of any age. Class 3, Shearling Ewes.

Pigs were arranged in 6 classes, thus :

Class 1, Boars of a *large* breed. Class 2, Boars of a *small* breed. Class 3, Breeding Sows of a large breed. Class 4, Breeding Sows of a small breed. Class 5, Breeding sow pigs of large breed. Class 6, Breeding sow pigs of small breed.

This comprised the entire show.

The prizes offered by this Society are worthy of attention, as showing the power of the machinery that produces such results as we witness here.—Only think of

$200 for best Bull.

$100 for the best Cow in calf or in milk.

$75 for the best yearling heifer, and so on through all the classes.

$150 for the best stallion.

$100 for the best 2 year old, and so on.

$150, $100, and $75, for the best sheep.

These prizes mean something. They are worth contending for, and certainly the results are every way worthy of them. Heretofore the competion was confined in the main to noblemen, but on this occasion, plain practical tenant farmers have successfully entered the field, and to such an extent, as not only to attract much attention on the show grounds, but to elicit comment in the dinner speeches.

After the surprise and admiration with which I first viewed the animals had subsided, I was forcibly struck with the predominate numbers of certain breeds of animals, and this seemed to me such an interesting point, that I took particular note of it.

I believe the whole number of animals fell somewhat short of 1000. Of cattle there were 385 : 176 Short Horns, 74 Devons, 41 Herefords, 31 Channel Islands (Alderneys, &c.), 22 Sussex, 10 Scotch Polled, 15 Welsh, Irish, &c., 9 Scotch Horned, and 7 Long Horns.

This shows us that about half the entire number were *Short Horns*, and that next to them comes the *Devons* and the *Herefords*. These three breeds are now pretty well known in this country, and form the principle stock at all our exhibitions. The others are yet scarce.

The Alderneys, or Jersey cattle, begin to attract much attention, and at the present moment are quite a speculation. Several droves were brought to London for sale while I was there. They are beautiful animals, and their milk is said to be of the richest and finest quality. ROSWELL G. COLT, Esq., of Patterson, N. J., has some of this stock, which we saw last winter, and he will have them at our State Fair, I think.

The *Scotch polled* are beautiful jet black, hornless animals, of large size and symmetrical forms, highly esteemed in Scotland. The specimens exhibited, were mostly from Aberdeen, in Scotland. Among the Scotch horned are the Ayrshires, celebrated as great milkers, and a hardy, long haired race from the highlands. I have admired these animals wherever I have met them. I saw fine specimens at the Smithfield Club show in 1849, and lately a fine herd of them in Scotland. They are easily kept, subsisting on the poor highland farms where the Durhams would die of hunger, and when they are brought into good pasture and generously treated, they fatten quick, for the food necessary to some other breeds for mere subsistence, is a luxury to them. Their flesh is fine too, and commands 6d. sterling per stone of 14 lbs., more than any other.

The curiosities of the cattle department were a Roman Bull and Cow exhibited by Lord Walsingham. They are large animals of a peculiar shape, high shoulders, a remarkably round quarter, short head, large spreading horns turned upwards at the points; color grey, with a dark brown neck.

An Indian Bull and Cow, very small, about four feet in height, something similar in shape and color to the Italian. The cow had a calf with her about as large as a lamb.

From Shetland, pure Shetland Bull and Cow, neither of them larger than a month old calf, and very poor, showing very plainly that they came from a cold climate and scanty pasture. What a contrast these little unfortunate looking creatures presented with the Durhams, yearling heifers of which weigh in some cases 800 to 900 pounds !

Of the horses more than two-thirds I should think were of the large Suffolk breed, for cart and dray work. These are magnificent animals. The class of two years old was throughout remarkably fine, many of them weighing about 1400 pounds, well proportioned, active and sprightly. These have none of the clumsiness of what we know here as the Norman horse, and I am convinced that they might be very advantageously introduced here to improve our work horses. We are all going too much for *speed* at present, and our work horses are too leggy and light of body—as a general thing.

Of Carriage horses I saw nothing better than some of our Rochester dealers send to New-York Market.

Of the sheep there were 136 Leicesters, 125 South Downs, 29 Long Wools, 19 Mountain, a few Merinoes—I have no note of any save one pen of five shearling ewes.

The Leicesters are preferred for the mutton, the flesh being of the finest quality. The mutton of the Leicester sheep that we get in England is a real luxury, whilst our mutton here is about as palatable as a tallow candle.

The Leicester Ram to which the $150 prize was awarded, was a noble specimen, two years and four months old, weighing about three hundred pounds. His back is not less than three feet in breadth. His fleece I was told was about 14 pounds and brought 1s. sterling per pound.

The Long Wools were composed of Oxfordshire and Cotswold sheep, fine large animals and of elegant form. The prize Ram was forty months old, and weighed about four hundred and twenty pounds, enormous in size and of fatness. Another 28 months old, weighed four hundred and sixteen pounds, and had made forty pounds in five weeks!

The Mountain sheep were principally *Cheviots*, large rough animals; and Shetlands, very poor, small, starved looking things, contrasting strongly with the others. One man exhibited five of these little Shetland ewes, and he felt highly indignant at the remarks they elicited, and the slurs cast upon their character and appearance. He said their fat sheep were all a humbug, they were unfit to breed, or even to kill; that his were in a natural state, were able to walk hundreds of miles, and fit for any thing.—There was some truth too in what he said in regard to the excessive fatness of many of the specimens. They were huge masses of fat, unable to stand up. In fact all the animals were too fat, except to show how fat they could be made. Of pigs about two-thirds were what are designated small breeds, Berkshire, Sussex, Middlesex, and crosses of these. These appear to be in general favor at present. Their bones are small, and flesh fine grained, and every way superior to that of the larger breeds. Many specimens of these were so fat that their legs could scarcely be seen, their eyes wholly concealed, and their very snouts barely projecting beyond the folds of fat.—The large breeds were less remarkable, though one of the prize specimens measured 9 feet long and 11 feet girt.

I find that my account of this show, which I intended should be brief, is already so lengthy that I must withold many details respecting the animals. What I have given may convey some idea of what is going on in England in regard to this branch of agriculture. At the close of the exhibition there was a grand dinner given, at which some 2000 persons sat down. Several speeches were delivered, among which that of Prince **Albert** is not the least worthy of note. He and the Queen gave particular attention to the show, as they do in all cases of great public interest. In response to the usual toast "The Queen &c.," His Royal Highness said:

"My lord duke, my lords and gentlemen,—I am very sensible of the honor which you have done me in proposing my health, and I can assure you, gentlemen, that the kind way in which you have responded to the toast will never be forgotton by me. Some years have already elapsed since I last dined with you in this migratory pavilion; and I am glad you should have pitched it this day under the walls of Windsor Castle, and that I should myself have an opportunity of bidding you a hearty welcome in the Home-park.—Your encampment singularly contrasts with that which the barons of England, the feudal lords of the land, with their retainers, erected around old Windsor Castle, on a similar mead, though not exactly in the same locality. They came then clad in steel, and with lance and war-horse. You appear in a more peaceful attire, and the animals you bring with you to the meeting are the tokens of your successful cultivation of the arts of peace. King John came trembling amongst his subjects, unwillingly compelled to sign that great charter which has ever since been your birthright.—Your Sovereign came confiding among her loyal and loving people; she came to admire the results of their industry, and to encourage them to persevere in their exertions; and the gratification which the Queen has felt at the sight of your splendid collection must, I am sure, be participated in by all who examine it. I am doubly pleased at this success, not only because it is witnessed by the many visitors from foreign lands now within our shores, whom every Englishman must wish to inspire with respect for the state of British agriculture, but also because I feel to a certain degree, personally responsible for having deprived you of one, generally most interesting feature of your show, I mean the field fruits, and the agricultural machines and implements.—Though separated from your collection, they are seen to great advantage in another royal park; and you will have been glad to hear that, whatever difficulty may be in deciding upon the superiority of the works of industry and art sent to the Crystial Palace by the different nations of the earth, the British agricultural implements are acknowledged to stand there almost without a rival. Let me now use the the privilege which your president has allowed me to enjoy, in proposing to you as a toast, 'Prosperity to the Royal Agricultural Society.' To its exhibitions, the means of comparison which they have afforded, and the emulation which they have stimulated, we owe, to a great extent, the progress which British agriculture has made of late. To this society belongs the honor to have been one of the first to appreciate the value of such exhibitions, and to have, from the beginning, liberally and fearlessly admitted all competitors without restriction. I drink 'Prosperity to the Royal Agricultural Society.'" His royal highness resumed his seat amidst loud applause. M. **Van de Weyer**, the Belgian Minister, proposed the "Health of the Duke of Richmond," and the convival proceedings elicited speeches from Mr. **Lawrence**, the American Minister, Lord **Ashburton**, Mr. **Denison**, M. P., and others.

WIRE FENCE.

Messrs. Editors.—Permit me to answer some inquires put forth in the Farmer by H. G. **Skinner**, in relation to wire fence, having experimented some myself, and also had a good opportunity of watching the results of experiments of others. First, I believe that three-fourths of the wire fence made in this section of country a failure, in consequence of the cheap manner in which it has been put up, and Mr. S. may be assured that the kind of fence he thinks of putting up will also prove a failure. The writer has some built in the following manner, which he is not satisfied with as being a safe fence against cattle—posts firmly set one rod apart, with four strands No. 9 wire. I further intend putting up more in the following manner, say forty rods; first, set a post firmly and well braced, then to each 16 feet set a good fence post, 2½ feet deep and so on the entire distance to a tightening post made in the following manner, have a stick one foot through, eight feet long, morticed into a sill and braced, to be bedded in the ground three feet, with four two inch auger holes bored in the same side, as follows, first, 18 inches from ground; 2d, 26 in.; 3d, 36 in.; 4th 48 in., said holes to be morticed out 2 inches deep, and two squares with a wooden pin made to loosely fit, with a head similar to a common wood screw to a carpenter's vice. I am now ready for the wire, best No. 9, (any smaller is worthless,) fasten to first post with a staple, and loop wire enough together to reach the last, which is done by turning it back about eight inches and twisting the end around the standing post, and secure this end by means of a staple to the head of the pin, which is then placed loosely in its hole in the post, and with a heaver screw upon it as tight as possible, and drive the pin home so the square will prevent the pin turning, and so on until the four wires are in place, and loosely stapled, each wire to each post. Now in each space we drive a three inch stake and also fasten the wire to it. The staples are made from the same wire cut in lengths of 2½ inches for hard wood post, and doubled together without pointing. It will be easily perceived that if we want to make this fence sheep tight, it can be done by adding a board at the bottom. **Bradford.**—*Kendall, Ill.*

To make poppies bloom till late in the season, cut off the capsules (seed vessels) as soon as the flowers fall.

"THE CAUSE AND THE REMEDY."

MESSRS. EDITORS :—"That the farmers of New England are eighty or ninety years behind those of Scotland, in the state of [in regard to] agricultural improvement," need not excite surprise, even if true. And as the subject seems to be creating some little interest, (see Genesee Farmer, No. 7,) I also "will show my opinion." And

1st, It is *not* for want of energy in the people of New England ; this trait, they have, as a people, no superior.

2d, It is *not* for want of general intelligence ; for in this respect they are, perhaps, second to none.

3d, It is *not* for the want of agricultural publications ; for of these there have been (and still are) enough, if they had been (or were) faithfully studied, and allowed to exert their proper influence.— But in addition to the reasons given by you in the 7th number of the Farmer may be added

1st, Necessity ; or rather, the abscence of it.— Scotland is an old country, and most of the tillable portions have long since been brought under cultivation, and would doubtless have been exhausted, had not some judicious system of farming been adopted. Necessity prepared the way for improvement, and led to its adoption. This necessity has but just begun to be seriously felt in New England ; hence efforts for improvement are yet in their infancy.

2d, The proverbial intelligence and energy of the New Englanders have created a kind of sectional vanity, which is seen more or less in all departments of society, even in agriculture, and is always hostile to improvement. Being independent in their ways of thinking, they do not care to be led by others.

3d, The same spirit, influenced perhaps, by some of the early "humbug" theories and notions on agriculture, has led to a kind of incredulity on the subject of all agricultural theories and improvements. Hence, the strong predjuces now existing in the minds of a large portion of the people. This incredulity has produced, and is producing, its effect.

4th, One of the most prominent characteristics of the people of New England, is the disposition to make money, (however liberal they may be in the use of it,) and to make it with the least possible outlay. It costs something to make improvements, and this has had, and to some extent still has, its influence on the subject in question ; *i. e.* has retarded improvement.

5th, The want of a convenient supply of substances suitable for manures, or fertilizers. New England, being a primitive region, contains very little limestone except primitive, and that in limited localities, and the use of it as a fertilizer, has not yet become very extensive. Ashes and barn-yard manure are almost the only fertilizers used in many places ; and these not always in the most judicious manner. Gypsum is coming a little more into use, and perhaps the time may not be very remote when the use of lime in some of its forms, (of which the soil seems most in need,) may become general.

6th, The fixed, or stererotyped, notion of a large portion of the people. Hence, a general aversion to change, both in opinions and practices. Hence, the difficulty of inducing the people generally to read on agricultural subjects, or to subscribe for agricultural papers, and the comparatively little effect on many who do read them. H.—*Down East, July*, 1851.

VIRGINIA LANDS, &c.

EDS. GEN. FARMER :—Sometime since I forwarded you a communication respecting Virginia lands, &c., little thinking I should be called upon to answer so many communications. I should be glad to answer all personally, but it would be almost impossible. Please insert this as apology for all and a general answer.

Those that expect Genesee lands in Eastern Virginia, will be disappointed. Very many plantations have never had a grass seed sown on them, and very few any until late years ; but grass will grow on them if properly cultivated. Crops average from the seed sown to fifty bushels per acre—very definite. Sheep do well—are seldom fed. Ewes drop their lambs in December and January, and consequently come into market early in the season, at prices from $2.00 to $4.00 each. If fed on turnips occasionally, would abundantly pay, as they are always a sure crop, and for size or quality can't be beat. I would prefer the medium grade of wool. Hogs — the breed cannot be improved, as they are required, the greater portion of the year, to provide for themselves, by *hunt and chase ;* those qualities they possess in perfection.

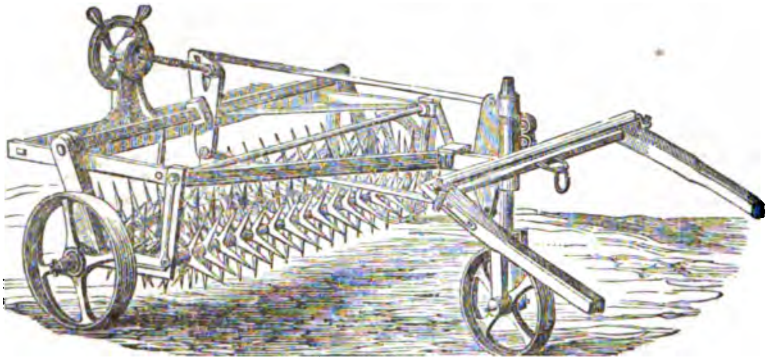
Waste lands, such as swamps and broken ridges, little or none. The country is gently rolling : plenty of springs usually, and soft water. Not many mill streams, but sufficient for the business of the country. Much of the land is, or has been, used up to the depth of two or three inches, no more. Lands I speak of, can be bought in Chesterfield, Dinwiddie, Amelia, and Prince George counties, at the price I speak of, say $3 to $8 or $10 per acre, fifteen to thirty miles from tide water and the cities of Richmond and Petersburgh. I have been here some three years—doctor's bill 6¼ cts. Am a northern man.

Horses and mules are high. Oxen, such as they are, $20 to $40 per yoke. Cows $10 to $20.— Fruit does finely ; but little raised for market ; mostly brought from the north. Same with hay. Small farms, with good improvements, of 100 to 200 acres, difficult to be had, except in the neighborhood of cities, which sell from $20 to $150 per acre. For any single family to move here and locate by themselves, is nonsense ; but for a large company, is the height of wisdom. Mechanics, I see no reason but would do well. As to Virginia land scrip, I never heard of it—must be a Wall street operation.

The lands are here owned by resident land owners—title perfect. Lime is worth, slaked, six to seven cents per bushel on wharf. Freight on railroads, &c., one cent per bu. any distance. Guano, $40 to $50 per ton, does wonders. Marl, plenty in Prince George county. Shells, four cents per bu. Payments for land, one third cash, balance in one and two years usually. Schools scarce—much ignorance. Slave labor unprofitable to hire. In my opinion, the counties above mentioned offer superior inducements, being near tide water and markets, and access, by railroads, plank roads, and rivers, with all the world, easy ; decidedly healthy, and land easily cultivated and cheap enough. But if a man is possessed of a good farm in the Genesee region, he is a fool to leave it, in the opinion of the writer ; but if he has a large family of boys, *like myself*, and wants to settle them around him, he might do well to try this region. SAMUEL CLARKE.—*Chesterfield Co., Va., July*, 1851.

ENGLISH AGRICULTURAL IMPLEMENTS.

THE English show of agricultural implements is the most complete that has ever been witnessed in any part of the world, and no other country but England could make such a show. The United States would probably come next. It is estimated that the agricultural products of Great Britain (England and Scotland) have more than doubled within the last forty years. A vast amount of this increase is clearly traceable to improved implements of culture. Some of our plain farmers, whose whole stock of implement consist of a plow, harrow, and wagon, would be puzzled if he looked into an English farm-yard, and saw such an array of seed drills, chaff cutters, grain crushers, bean mills, rollers, scarifiers, cultivators or horse hoes, liquid manure carts, manure distributers, and a multitude of other articles not in general use, and that many of us never heard of. The English implements are almost wholly made of iron, and are consequently very heavy. Many of them would be quite useless in the United States, but some appear to have properties that recommend them to the attention of our farmers and implement makers. For instance—



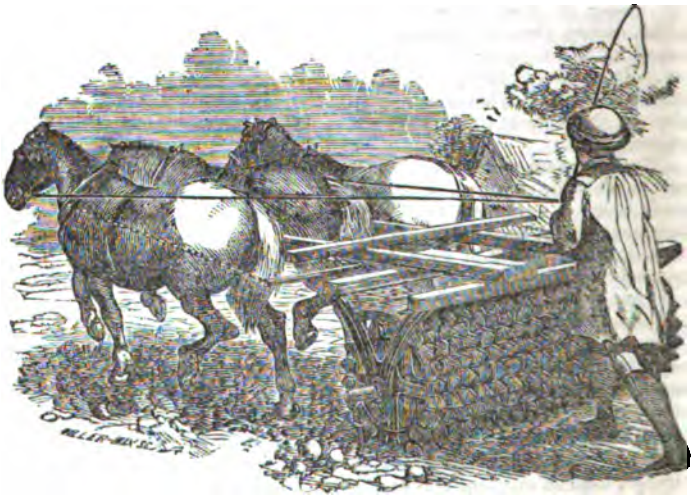
NORWEGIAN HARROW.

1st. *The Norwegian Harrow.*—This seems to be an excellent implement for pulverizing the ground to the depth of six or eight inches. It consists of three parallel axles, on which spikes are fixed so as to pass between one another as the axles revolve. It is said to work admirably on any sort of ground. At the same time that the spikes fork the ground over completely, the weight of the implement crushes the clods, and reduces them to powder. I think it would be a valuable article in the preparation of wheat grounds, especially where the soil is of an adhesive character. They are made of different sizes, from three and a half to five feet wide, and the spikes five to eight inches long. These are in some cases curved and in others straight; some have four wheels, and others only three — one before and two behind. A greater or less pressure is obtained by means of a screw or a lever, which raises or lowers the axles at pleasure. The price varies from £13 to £15, ($65 to $75.) A great medal was awarded this implement at the Great Exhibiton.

2d. *The Clod Crusher*, (Croskill's Patent.)—A great medal is also awarded to this implement. It is in fact a rollor, consisting of twenty-three roller parts, with serrated and uneven surfaces, placed upon a round axle six feet wide and two and a half feet in diameter. These roller parts act independently of one another upon the axle, and produce a self-cleaning movement. It is taken to the field on the wheels; a hole is then dug in the ground for each wheel, deep enough to cause the rollers to rest on the ground, and then the wheels are taken off.

"The following are the various uses to which this implement is applied:

1. For rolling corn as soon as sown upon light lands; also upon strong lands that are cloddy before harrowing.
2. For rolling wheats upon light lands in the spring, after frosts and winds have left the plants bare.
3. For stopping the ravages of the wire-worm and grub.
4. For crushing clods after turnep crops, to sow barley.
5. For rolling barley, oats, &c., when the plants are three inches out of ground, before sowing clover, &c.
6. For rolling turneps in the rough leaf before hoeing, where the plants are attacked by wire-worm.
7. For rolling grass lands and mossy lands after compost.
8. For rolling between the rows of potatoes, when the plants are several inches out of ground."



CROSKILL'S PATENT CLOD CRUSHER.

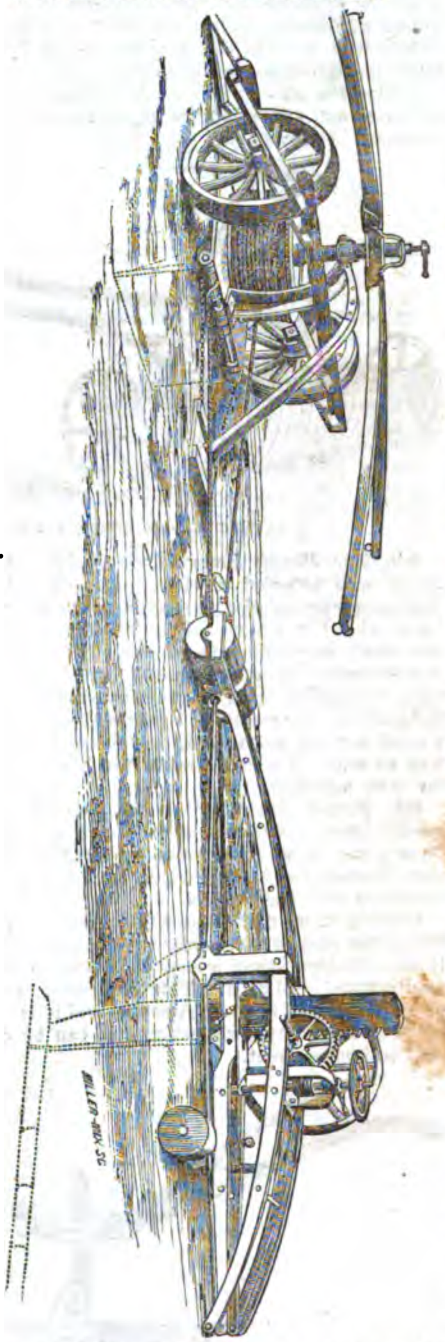
I have been assured by gentlemen who have used this implement for several years, that it is highly effective. Of course it can only be used when the ground is dry, The price varies from £18 to £20. It has been in use for a great many years in England, and has received many premiums and recommendations from agricultural societies and committees.

3d. ***Fowler's Patent Draining Apparatus.*** — Draining is one of the most important operations of culture in Great Britain, where the climate is damp and cold. It is expensive, too, and therefore every contrivance calculated to facilitate and cheapen it, is looked upon with much interst. This Fowler's patent is a most remarkable apparatus, and in the exhibition attracted much attention. Few, however, seemed to think that it would come into general use. My own opinion is that it will not; but the patentee speaks confidently of its merits, and offers to contract for the execution of any amount of draining with it, that may be put in his hands. I hope our implement makers will look into its merits; for the draining of land is here, as well as in England, both an important and expensive operation. The manufacturers, Messrs. Fowler & Fry, of Bristol, say—

"It is now capable of executing any drainage that may be required above the depth of four feet, at less than half the cost of the present system, and without disturbing the surface soil.

"The engraving shows the machine just as it is finishing the drain. When commencing work, the plow is taken to one end of the field, and the capstan is moored at the other; the wire rope being run off the drum of the capstan and attached to the plow, (either singly in shallow draining or soft soils, or returned round a single sheave where greater power is required,) as shown in the drawing. The plug and coulter are then dropped into a hole prepared for them, and the pipes threaded on a rope are attached to the back of the plug, the hole being sloped off backwards to allow them to enter easily. The horses are attached to the horse levers of the capstan, and by walking in a circular course wind the wire rope on to the drum, and pull the plow forward with the pipes attached. When the required length of drain is completed, (which may be anything under 225 yards,) the plow is run into another hole, and the ropes on which the pipes are strung, being unhooked, is pulled out backwards, and the drain is complete. As it would be inconvenient to have the pipe rope in one length, it is made in pieces of fifty feet each, and by a simple contrivance, as one rope enters the other is attached to the end. Great care and attention have been paid to the means of moving the machines for commencing another drain; and it does not now occupy more than one quarter of an hour from the time of finishing one drain to commencing another. The accuracy with which the pipes are laid can not be equalled by any hand work; and from the bottom being undisturbed they are never liable to sink, as is sometimes the case even in the best executed hand-draining.

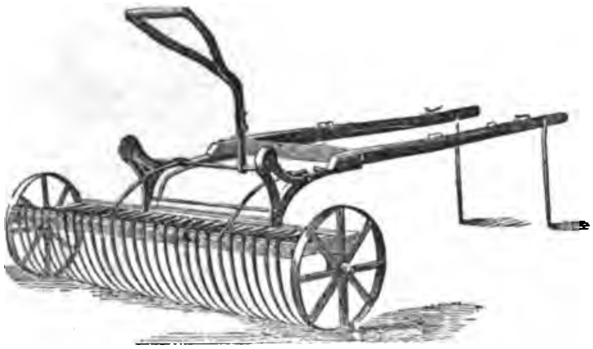
"By this process, not only is the cost of burying the tiles reduced in many cases fifty per cent, but from the quickness and neatnesss of the operation it can be done at any season of the year, without injury to any short crop or interfering with the common farm operations, the surface soil being untouched, except at the headlands: and where the hedges are low, the capstan can often be fixed in the next field. In undulating or flat lands, the levels are kept, or a fall insured by working the coulter up and down in the body of the plow, by means of the worm and worm wheel, shown in the drawing, the plowman's eye being guided by a try-sight balanced on the plow, and a cross staff erected at the end of the field.


MILLER-DEL. SC.

FOWLER'S PATENT DRAINING APPARATUS.

"Several of these plows are now in constant work, and though great lengths of the drains have been opened in the presence of large numbers of agriculturists, in no instance have tiles been found incorrectly laid.

"The quantity of draining that can be done per day will vary with each particular field, but in common clay land when the depth does not exceed three feet, between 6 and 7,000 feet will be completed with four horses in the common working day; but when the depth exceeds three feet, from two to three horses will not do more than half that quantity.—Where it is possible, this draining would be much more cheaply done in the summer, as twice the quantity of work may be done by having two teams of horses out, and the other expenses would not be increased in proportion."

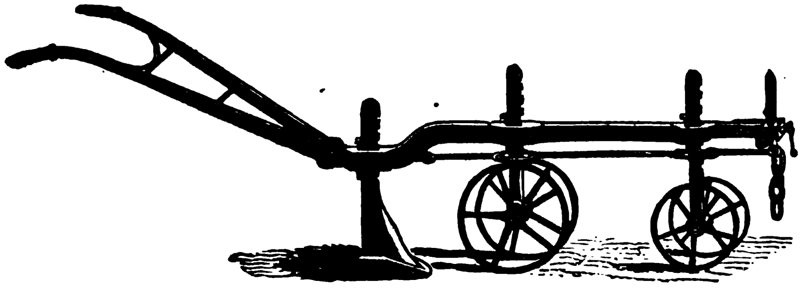


PATENT LEVER HORSE RAKE.

4th. *The Patent Lever Horse Rake.* — A prize medal was awarded to this implement also. It strikes me as superior to anything in the way of horse rakes that I have seen. The frame and teeth are wholly made of wrought iron. The teeth work independently of one another, and consequently adapt themselves to all inequalities on the surface of the ground. By means of a pull down lever, which a small boy can manage, the load is emptied. Price $35 to $40. There are rakes for hand power, on the same principle.

5th. *Patent Subsoil Plow with four wheels.*—Of subsoil plows I observed a great variety. None of them presented great advantages over those of Ruggles, Nourse, and Mason, which we use, save this of Howard's with four wheels.

It seems to me that these wheels must very much reduce the friction and render the draught lighter.—It has obtained many prizes, and those who have used it speak well of it. This implement is one of great importance to us in America, and it is our interest to adopt any modification that can be considered an improvement.



PATENT FOUR-WHEELED SUB-SOIL PLOW.

The Messrs. Howard speak of this plow as follows: "The Patent Subsoil Pulverizer is a most simple and effective implement for breaking up the hard close earth below the furrow, which has been rendered almost impervious to water by the trampling of the horses when at plow. Being mounted upon four wheels, which run in the furrow made by the common plow, there is no friction on the sole as in other subsoil plows, consequently the power required in subsoiling is materially reduced.

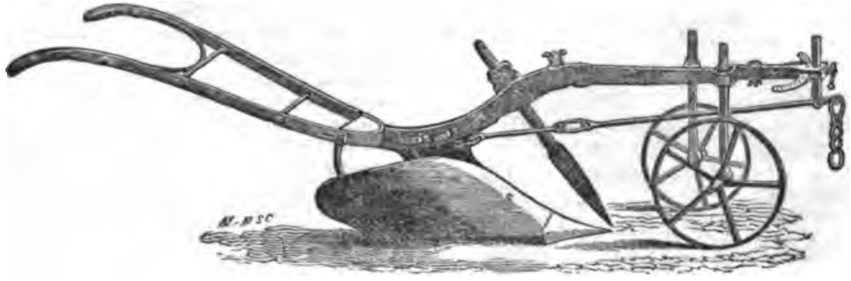
The improvements made by J. & F. H., in this important implemennt consists in the application of a solid iron beam and handles, allowing the wheels to run nearer each other, consequently it does not require so wide a furrow to work in; the beam is also cranked so as to elevate the head of the plow, through which the implement will perform harder work; it is also furnished with a draught chain which removes all strain from the beam.

The head can be adjusted so that two horses can be worked in the furrow and one upon the land.

This implement is found most valuable in hoeing or plowing between the rows of root and other crops, as it will stir the soil to a greater depth than a horse-hoe which is often desirable after heavy rains. It may be fitted with a frame to which two extra shares may be attached, making it a perfect horse-hoe.

It will also be found useful in draining operations upon friable soil; after a furrow has been taken out by the common plow, this will so pulverize the sub-soil, that it may be removed by a shovel. Price, £5 10*s.*; if with wood beam and handles, £5."

The Plow.—After all, this is *the* implement on which more has been said and written, and which at this moment calls out more discussion than any other. I have scarcely found two implement makers in the Exhibition, nor two practical farmers who agree upon the same model. Every Scotch agriculturist I had an opportunity of conversing with seemed convinced that the plow he used at home was superior to any in the Crystal Palace. No other implement presented so great and interesting a variety, for almost every nation presented specimens of their plows, and could trace its history from the rudest apology, composed of two or three rough sticks coarsely put together, as in the India department, up to the latest effort of English skill, which we are bound to acknowledge as the most refined instrument of the kind in the world. The annexed figure is one of Howard's prize plows, on the whole the best adapted, I believe, to general purposes of any in the exhibition. It contrasts strongly with ours. Its great length gives its stability.—The long and gradually spreading mould-board turns the furrow without breaking it.—The two wheels seem to reduce the friction and secure greater uniformity in the width of the furrow. Great attention is properly given to the wearing parts, not only in material but in arrangement, so as to render them durable and easily changed or replaced. The softness of most of our plowshares causes them to wear out rapidly. Last spring we wore out a



HOWARD'S PRIZE PLOW.

point every four or five days. On the English plows they are case-hardened and wear well. The Messrs. Howard describe the prize plow as follows:

"The Prize Plow is made entirely of iron (principally wrought.) and is so constructed, that it is sufficiently strong for four horses, as well as being easier in draught for a pair, than any plow ever tested by the Royal Agricultural Society. Its peculiarities consist in the very taper and regular curve of the cutting and moving parts, great attention having been paid by the makers to the share and furrow turner, (of which they have several patterns,) not only with a view to reduce the draught, but to make it suitable to as great a variety of soil as possible.—A most simple method of instantly adjusting the coulter is adopted, which is unusually secure when set, so much so that no single instance of failure has occurred, even on the strongest land, and for which *Her Majesty's Royal Letters Patent* have been obtained; this plan prevents much loss of time, so frequently complained of in the old method of fastening the coulter by wedges.

J. and F. H. consider the method of applying a draught chain, far superior to any other; inasmuch as it removes all strain from the beam; giving it in hard work a steadiness of movement, not to be found in plows which draw from the end of the beam; the line of draught is also much more direct, consequently the power required must be reduced; the hinder part of the draught chain may be removed, and attached to a hole in the centre of the beam, when plowing stubbles, &c., where it drives up the coulter. The handles and beam, which are of wrought iron, are made throughout in a piece, preventing them shaking loose, which is the case with most other plows made of iron; this latter improvement also prevents the accumulation of soil in the hinder part of the plow. Every part is so arranged that a plowman can remove or replace the irons subject to wear or breakage in the field, without the assistance of a mechanic. It can be worked either with or without wheels, or with one as required. A broad share may be had with it for paring stubbles or turf; also a share for subsoiling and one of a triangular form, to plow between the rows of beans or root crops.

It may be had with breasts or furrow-turners for extra deep plowing.

	£	*s.*	*d.*
Price, fitted as a swing plow,	3	4	0
" with one wheel to run on the land,	3	10	0
" with two wheels, as used at the trials of the Royal Agricultural Society,	4	0	0
" if fitted with skim coulter, extra,	0	5	0

Any of these implements can be had of Mr. Thomas Whalley of Liverpool.

S. W.'S NOTES FOR THE MONTH.

THE CROPS.—Wheat and barley although in part injured by the worm, will be an average crop; barley, but for the worm, would have been a large crop, as it is, the croakers say there will be little over half a crop. Mediterranean Wheat not only escapes the worm, but it has much improved in process of acclimation, both in color and plumpness. Hay is abundant. Indian corn will be a large crop on all rich, dry, well tilled soils; but the unusual moisture of the season has been injurious to this cereal when attempted to be grown on a flat, undrained field. One farmer tells us that he has a large crop of flax on a ten acre field for which he has contracted the seed at ten shillings the bushel, and eight dollars the ton for the rough, undressed flax.

WOOL AND WOOLENS.—It is said that the State of Ohio has sent to the New England States about eight million pounds of wool this year, all of which is sold at very remunerating prices. The prosperity of our cotton mills having met with a check by the great home competition, with true Yankee expediency our manufacturers are now going into the production of mixed fabrics, *mousseline de laines*, &c., on a large scale. It is said that the Bay State Mills have made 280,000 fine woolen shawls within the year. Waterloo Mills have credit in the statistical tables for making only 22,000 shawls, which our superintendent says is short of one half the number actually made at these mills within the last twelve months. 1000 of those shawls have been sold to go to Canada, where, after paying a duty of 10 per cent., they outsell the shawls of John Bull in his own market.

BARLEY, OATS, AND FLAX SEED.—Few crops in this region pay so well as barley, oats, and flax seed; but farmers say barley is uncertain, and that oats and flax seed "are very exhausting crops." It seems odd to hear a farmer complain of an exhausting crop, when he leaves his naked fallow to waste its ammonia three long months in a summer sun. I know a farmer who says that nothing exhausts the soil so little, that pays so well in a dry season when hay is short, as oats cut in the milk for winter fodder, particularly for sheep. He stables his cows six months in the year, and makes the most of his manure by composting, &c. *Waterloo, Aug.*, 1851.

TO PREVENT HORSES BEING TEASED BY FLIES.—Take two or three handfuls of walnut leaves upon which pour two or three quarts of cold water; let it infuse one night and pour the whole the next morning into a tea-kettle and let it boil a quarter of an hour; when cold it will be fit for use. To be put on the parts most irritable, with a sponge.

Horticultural Department.

EDITED BY P. BARRY.

"THERE is no place like home." After traveling over a great portion of the most fertile and best cultivated districts of Europe, in the most favorable season of the year, I can now, on my return home, sit down and write deliberately that, in a horticultural sense, "*there is no place like home.*"—I verily believe that there is not in the world a spot that, taken all in all, is more favorable to the successful prosecution of agricultural and horticultural pursuits, than our own Genesee Valley. There are milder climates and more equable temperatures, where a greater degree of personal health and comfort, as far as they depend upon climate, can be enjoyed; but nowhere that I have been, does the earth yield such bountiful crops, under such simple treatment. Nowhere have I seen such wheat and corn fields, such natural forests, such apple, pear and peach orchards, such fruitfulness, and such luxuriance of growth, as here. But this is not all; where else can we find such a prosperous population?—such an equal distribution of wealth and fortune, such an absence of want and privation, such a general diffusion of education, and such a universal enjoyment of every right and privilege that men in a civilized society can wish or ask for?

If any one feels dissatisfied here with his lot, or has any hankering after some distant Eldorado, let him only travel a few months abroad and we are mistaken if he do not come home fully reconciled and devoutly thankful. These are our feelings, at least.

Our agriculturists here know nothing of the deep and harrassing solicitude that pervades Great Britain in regard to the safety of the harvest. The labor of making hay and saving grain crops in our dry, warm climate, clear sky, and bright sun, is comparatively nothing. The labor of keeping down weeds, and the ground loose and friable, is also a mere trifle, compared to what it is in a country where rain falls daily and the sun seldom shows himself. There are a multitude of other advantages that every intelligent farmer well understands.

In regard to fruit culture, our advantages are still greater. An orchard of fruit trees in this country, even when well attended, does not require as much care and labor in five years as it does in one in the greater portion of Europe. A single peach tree in England or France, receives more actual hard labor in one season, than an orchard of one hundred trees in Western New York; and the price of a single fruit, or at any rate half a dozen, in the markets of London or Paris, will buy a bushel in New York or Rochester. We complain of curculio destroying our plums and apricots, and this is one of our greatest drawbacks here, but, notwithstanding, I have seen more plums and apricots on a single tree here since I returned, than on any dozen I saw in England.—We have the aphis on our cherry trees here, but they are easily destroyed. In both France and England I saw both orchards and nurseries of cherry trees almost ruined by them, and they were said to be unconquerable. We have fire blight and leaf blight here, and both are sad difficulties, but in France and England they are not without both these maladies. I saw apple trees very seriously affected, in England, with what we designate fire blight—the ends of the branches black and dead, and there, as here, the real cause is quite unknown to the most skilful cultivators. In France, I saw as bad cases of our leaf blight on the pear, as I have ever seen in America. The ravages of birds in Europe are tremendous. It is almost impossible to save a crop of cherries. Nets, scarecrows, and a thousand expensive and troublesome devices are practiced, that in this country, where labor is dear, would not be attempted, even though the culture should be abandoned.

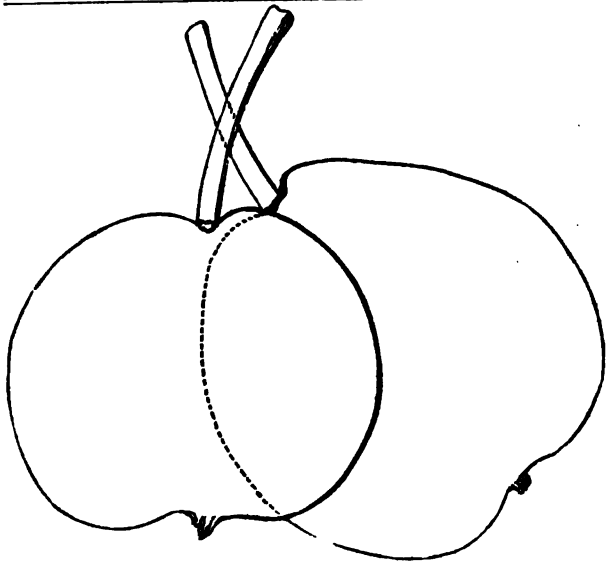
Fruit stealing has been supposed to be peculiarly an American vice, but it is not so by any means, though, probably, quite as prevalent as elsewhere. In other countries fruit gardens are better protected than in ours, and this gives them a greater degree of safety; but in France I saw several nurseries at some distance from houses, where the fruits were removed as soon as they appeared, to save the trees from being broken by the fruit stealers. If in America we were to apply ourselves to culture with the same indefatigable perseverance, the same regardlessness of labor that I have seen in Europe, we could produce results that we do not now dream of, and we will come to this by and by—we are every year approaching it nearer and nearer—our culture is becoming more skilful, more thorough, and more successful; but we have only made a beginning.

In Horticulture, as in Agriculture, the United States of America has a great destiny to fulfil. Our territory is not only immense, but so diversified in soil and climate, that all the most valuable grains and fruits can be produced in such abundance as will enable us to supply other countries less favored in these respects. The intimate connection now established between all parts of the world, has removed the barriers which distance has heretofore created, and we have now a clear course. Cultivators may redouble their energies with a sure prospect of reward, and if our government, in its wisdom, should see fit to lend a helping hand, all the better.

PROCEEDINGS OF THE HORTICULTURAL CONVENTION

held at Burlington, Vt., Feb. 11, 1850, and organization of the Champlain Valley Horticultural Society, with an Appendix containing a list of fruits reported by the Standing Fruit Committee.

WE are indebted to JONATHAN BATTY, Esq., of Keeseville, for a copy of a pamphlet of 72 pages bearing the above title, which explains its contents. The discussions consequent upon the organization of a Horticultural Society are highly interesting, evincing not only a general desire to adopt the most efficient means for the promotion of horticultural improvement, but a spirit of good will and kindly cooperation among those who have taken the subject in hand, that must and will be crowned with success.



THE DOYENNE D' ETE PEAR.

We have had a fine crop of this variety the present season on several dwarf trees four years old, and can therefore speak with confidence of its merits. It comes fully up to our expectations, being a very beautiful and good summer pear.

Fruit small, roundish or obtusely turbinate, very regular. Stalk stout and about three-fourths of an inch long. Calyx small, closed, and very slightly sunk. Skin smooth, pale yellow, ground finely dotted with red in the shade, and striped and marbled with clear red in the sun. Flesh white, melting, and sugary, with a great abundance of juice. The wood is vigorous. Young shoots of an olive brown. Buds pretty large, pointed, dark brown. Leaves medium size, slightly folded and finely serrated, the older ones slightly waved. Tree exceedingly productive and bears quite young. The fruit is produced in clusters of three or four in each. Ripe here this cold wet season on the 26th of July, and remained in eating till the 10th of August. It immediately succeeds the *Madelaine*, or in fact may be said to ripen about the same time. We find that it matures perfectly on the tree, and is less perishable than many other summer varieties. Mr. Hovey has figured it in his "Fruits of America."

It originated in France, and has been introduced to this country only within the last seven years. Noisette says he obtained it from Nancy, a town in the northeast of France, near Metz, and we think it was probably disseminated from the nurseries of that town.

The Twenty-Fourth Annual Fair of the American Institute will be held in New York, commencing October 1st. The following are among the premiums offered:

$10 for the best Flower Garden.

$15 for the best display of Dahlias, (to be renewed during the fair.)

$15 dollars for the best display of Fruits; $10 for 2d do.

$8 for the best show of Apples.

$8 for the best show of Pears.

$20 for the best farm of 100 acres.

$10 for the best Market Garden.

The first and two last are quite too small. The best farm and market g[illegible]n ought to have at least an award of $100 each, to be in proportion with the others.

To Fruit Growers, Vegetable Gardeners, &c.—We trust that there will be no backwardness among the orchardists and gardeners of our own, and even neighboring States, in sending in their best products to the State Fair at Rochester, on the 16, 17, and 18th of this month. The interest now felt in horticultural affairs, and the reputation of the Genesee Valley for excellence in fruits, will naturally attract a large number of persons from all parts of the country, and we must make proper effort to meet their expectations. The management of this department is in the hands of a very competent committee of gentlemen, who we feel confident will make such arrangements as will admit of every contribution being shown to good advantage, and this is a great encouragement for exhibitors. Every man who has even a single fruit, flower or vegetable of excellence, should not fail to send it in, not only for his own credit's sake, but to augment the interests of an exhibition so well calculated to benefit the country at large. It is too often the case, that those who have but one or two articles fit to present, consider them not of sufficient importance, and again others will not exhibit unless certain of a prize; but these are great errors. Such a spirit is wholly unworthy of men who desire to be ranked among the friends of improvement.

Seedless Apples.—Mr. E. A. Graham, of Portland, Conn., writes us that seedless apples are produced in his neighborhood, by raising the trees from *layers*. A branch of a young grafted tree is bent down and a portion of it covered with earth, where it remains till it has taken root, when it is cut away from the parent tree and planted out. We do not believe that the absence of seeds in the fruit is attributable to the mode of propagation.

ANSWERS TO CORRESPONDENTS.

(R. L. Gozlay, South Edmeston, N. Y.) Seeds of strawberries, raspberries and gooseberries should either be sown as soon as ripe, or put among sand or sandy earth till the spring following. We succeed well both ways. They should be sown in very light friable soil, and covered not over one-fourth of an inch deep. The same remarks may be applied to rose seeds.

Apple, pear and quince seeds are usually sown as as they are cleaned in the autumn. Occasionally kept over till spring among sandy earth in cool places.

Peach and plum stones require to be stratified, that is laid in thin layers near the surface of the soil during winter, so that the freezing and thawing and moisture of the soil may prepare them for vegetation the following spring. Thorn seeds should be put in a rot heap in the ground, mixed with the earth when gathered and remain there *one year*, when they may be taken out and sown. Apple, pear, quince and thorn seeds are all sown alike. A drill is opened with a hoe, say two inches deep, the seed is evenly distributed, and a covering of an inch to two of the finest soil drawn over them.

Ants.—The best method we know of to rid trees of these insects is to *trap* them with some bottles of some sweet liquid hung among the branches. In the ground, turpentine may be poured on their nests. The book was sent some time ago.

Mr. Editor:—As one of your subscribers, I take the liberty of asking you to give in your paper, directions for raising tulips from the seed, and the best mode of managing them from year to year, till they flower. If convenient, please also to give a description of *Fortune's New Yellow Rose*; and the same as regards the *Lilium lancifolium*, in two or three of its finest varieties. By so doing, you will much oblige E. P.—*Portland, Me., June*, 1851.

To raise Tulips from seed, let it ripen well on the flower stem, the capsules should be quite brown and ready to let the seeds fall. Sow immediately in light soil, covering half an inch deep, or put in sand and keep till spring and then sow. After growing a couple of years in the seed bed, the young bulbs should be transplanted into the beds where they will bloom, at the fourth or fifth year of their age or the second after transplanting. The soil at all times should be light, having a large admixture of sand and also be deep and rich, and clear of weeds.

Fortune's New Yellow Rose has not bloomed with us yet. We have plants of it however, and we think it must be very much like the Banksias. His five colored rose has bloomed well with us this season and proves an acquisition. It is distinctly stripid like a carnation.

Japan Lilies.—*The Lilium lancifolium album* is pure snowy white, the *punctatum* is white with delicate rosy spots, and the *rubrum* or *speciosum* has partly a white and partly deep rose colored ground, covered with projecting crimson dots.

This is the most showy of them all. We have at this moment a superb show of them all in the house, in pots, but they succeed well in the open ground with the same culture as other lilies. An interesting article will be found in Vol. 9, on these flowers.

Mr. Editor:—As you are kind enough to answer the inquiries of correspondents in the Genesee Farmer, I respectfully solicit advice in the management of an orchard which has been neglected until it presents a very unsightly appearance. The limbs are thickly covered with what I suppose to be fruit spurs, down to the body of the tree, and are so gnarled and knotty as to give the tree a very scraggy appearance. The trees do not appear to have grown any for a number of years, except the spurs, which have grown in one direction one year, and another year another direction, from a quarter to a half an inch at a time. The trees are young and the soil is good, and in grass. Ought the spurs to be trimmed off? and ought the ground to be plowed and cultivated? A Subscriber.—*Pleasant Mount, Pa.*, 1851.

Your trees are deficient in vigor. Thin out the spurs by cutting away the older and most deformed ones; cut away some of the old, enfeebled branches also. Spade the ground about the roots, turning in some old, well rotted manure, and some lime. You will thus induce a new growth, and that is what is wanted.

Mr. Editor:—It was with pleasure that I read an article in your valuable Farmer, concerning the method of preventing the striped bug from destroying vines, by putting a handful of tansey about them. I dropped the paper and started for the tansey bed, and soon had my vines surrounded with tansy: but it only seems to answer as a hiding place for them. I have tried many recipes, but the only one that has been of service to me is to *catch and kill them.*

I have a question to ask you, through the Farmer. What is it that punctures or bores the limbs of peach trees, thus causing the leaves to curl up? I have kept as close a lookout as I possibly can, to discover the "varmint," but can not succeed. Something bores a hole in the twig and deposits its egg, the limb swells, the leaves curl, and on cutting the limb open, you will discover a small maggot. If you know any remedy, let us have it. (1)

There is another little nuisance that has troubled my cherry and peach trees very much. It has a very blunt, thick head, otherwise it resembles a very small snail. Do you know the name of it, and what it springs from? (2) I have succeeded in keeping it under my control this season, by sowing ashes over my trees, which sticks to them and destroys them effectually. J. M. A. Estey.—*Ogdensburgh, N. Y., July*, 1851.

(1) We have not seen the limbs of peaches punctured here by insects, but we have "curl" in the leaf during May and early part of June, occasioned, as we believe, by cold and variable weather.

(2) This is the well known slug worm described in Harris' Treatise as *Selandria cerasi.* The remedy you have adopted is the one we adopt, and is quite effectual.

Mr. Editor:—As a subscriber and reader of your excellent paper, I would ask if the Black Mulberry would not thrive in this climate. The trees by nature attain a very large size, similar to the black oak that grows in a clear field. I do not recollect of seeing any of them since I left my native town, East Hampton, L. I. There I knew some half a dozen of them very large. Could it not be dwarfed the same as the pear? If so, please inform me. Are there any at the nurserys in your place? The Black Mulberry is a most delicious fruit—ripe last of June, on Long Island. Daniel Miller.—*Fulton, Oswego Co., N. Y., Aug.*, 1851.

The Native Black will undoubtedly thrive well with you. We cultivate the Black English Mulberry, the fruit of which is superior to ours, and the tree is not so large. We know of no efficient mode of dwarfing, except by pruning root and branch.—There are some dwarf species on which it might be worked, but we have not yet made any such experiments. The fruit on our Black Mulberry trees (English) is ripe now.

Mr. Barry:—I have on hand a few dwarf pear trees which I wish to set out this fall. Would you advise me to set them out in an orchard of standard trees, or inclose them by themselves? The ground they occupy is nothing. D. Gault.—*West Carlisle, Ohio*, 1851.

If you have land enough, by all means plant them by themselves. It is easier to give them the particular care and culture they require. There will be no danger of their being injuriously shaded by taller trees, and they will look better than if mixed with standards.

Planting Standard and Dwarf trees on the same land is an excellent economy for market growers where land is scarce and dear, but not to be recommended to amateurs who have land in abundance.

Mr. Editor:—Will you inform me through the Genesee Farmer, or some other way, whether the apricot and nectarine will do well, worked on the peach? If they will not do well on the peach, what will do for stocks? Will August be too late to budd them? What kinds are the best for common uses in our climate, embracing three or four varieties? J. D. Conklin.—*Locke, N. Y., July*, 1851.

Both the Apricot and the Nectarine succeed well on the peach stock in light dry soil. In heavy clay soils use the plum. You can bud on the peach in August and September, but it should be done on the plum earlier unless it be the wild Canada and some such late growing species. Best Apricots—Breda, Early Golden, Moorpark, and Peach.

Nectarines—Early Violet, Elruge, and Downton.

Mr. Editor:—Can apple trees, gooseberry and currant bushes, and strawberry vines, be sent from Rochester to Montpelier in safety? S. W.—*Calais, Vt., July*, 1851.

Certainly; any time between the 10th of October and 10th of November in autumn, or from the middle of March till first of May in spring. Strawberry plants can be sent at any time.

Editor's Table.

New York State Fair.—The next State Fair is to be held at Rochester, on the 16th, 17th, 18th, and 19th, of September. Although we wish not to make promises, preferring rather that those who visit it should be agreeably surprised with the extent and arrangement of the show, yet from our knowledge of the facts, we may be permitted to say that those who have charge of the matter are doing all in their power for the success of the exhibition, and for the accomodation of visitors. Our fruit-growers and horticulturists feel particularly anxious to do themselves credit, and we shall be sorely disappointed if the show of fruit is not *superior*—one that never has been and is not likely to be excelled by any exhibition in any part of the world.

Tuesday, Sept. 16, will be devoted to entries, and arrangment of animals and articles for exhibition.

Wednesday, 17, the judges will attend to their examinations. The grounds will be open on this day only for officers, guests, delegates, members, judges, and exhibitors. The Executive Committee will meet at their large tent at 11 o'clock, and the judges are required to be present, as vacancies will then be filled.

Thursday and *Friday*, 18 and 19, the exhibition will be open to the public.

The *annual address* will be delivered by Senator Douglass, of Illinois, on Friday afternoon on the show grounds.

The award of premiums will be made immediately after the address, and the Treasurer will pay them at the Business Office till the close of the day, and in the evening and on Saturday forenoon at the Society's rooms at the Eagle Hotel.

Forage and water in abundance will be furnished for stock, straw for litter, and grain for swine and poultry.

It is the intention of the officers to make the sale of stock, implements, &c., a permanent feature of the fair. The opportunity thus afforded to inspect the best stock in the country, with a view of making purchases, should not be overlooked.

There will be a large collection of poultry, and those who have heard so much of late of improved breeds, without having an opportunity of seeing them, should embrace this opportunity. The Shanghaes and Cochin Chinas will be well represented, and speak for themselves, although they appear to have been very badly treated by the Executive Committee in making out their premium list.

☞ Exhibitors must become members of the Society, and have their articles and animals entered on the Secretary's books, not later than Tuesday, 16th September. And all articles and animals except horses, must be brought within the enclosures as early as Tuesday noon, in order that they may be suitably arranged. Horses will be received early on Wednesday morning, but must be entered previously.

Members of the society and all who may become such at the time of the Show, by the payment of $1 to the Treasurer, will be furnished with badges or cards of membership, which will admit the person and his wife and children under 21 years of age, to the exhibition at all times during the continuance of the show.

Single tickets 12½ cents, admitting one person, will be ready on Thursday morning, at the Treasurer's office, at the show grounds.

Persons desiring accomodations for stock will have provisions made on application to Mr. J. P. Fogg, Rochester.

The judges (especially those on animals,) will be expected to give the reasons of their decisions, embracing the valuable and desirable qualities of the animals or articles to which premiums are awarded.

Stump Machine.—Our attention has been called to an error in our plan of a Stump Machine, in the June number. The round pole or lever (fig. 1) should be 10 feet, instead of 10 inches long, as incorrectly stated.

Seeding with Wheat.—The most common defects in preparing ground for seed wheat is a failure to till the soil so thoroughly as it really needs. The great art of tillage is better displayed in wheat-culture than in any other crop grown at the north. The earth should be broken up exceedingly fine, if one desires to develope its highest capabilities, and at a reasonable depth. **Jethro Tull** made a reputation which has already endured over a century, and is likely to last for several to come, by his skill in comminuting the soil for a "pasture for wheat plants." He was the father of drill husbandry and horse-hoeing in the culture of wheat; and he maintained that tillage was a perfect substitute for manure, if well performed. In this he erred, but his practice has not been materially improved upon in 130 years, with all our modern science. Deep and fine tilth, with propper drainage, were the Alpha and Omega of his system. A wheeled cultivator is a valuable implement for putting in seed, or preparing the land for it; but a good harrow will do excellent work if thoroughly used. More farmers neglect the harrowing than the plowing of the soil in all tillage where both are required to mellow the earth, and subdue grass and weeds. Be careful to open water courses where they are necessary to prevent the washing of a light soil, and to cover the seed at as uniform a depth as possible.—Wheat washed in strong brine and dried in recently slaked lime will seldom be affected by smut.

Prepared Guano.—We would advise our readers to be very cautious in buying any of the nostrums for sale as "*Prepared Guano.*" They are generally got up for the purpose of emptying instead of filling the purses of farmers—and in this, appear to be quite successful. We have now before us a specimen, purchased at Peck Slip, New York, and for which E. T. **Kirkham**, of Knowlesville, in this State, paid $1 per hundred pounds, which we should judge would be about as valuable as coal ashes. It appears to be composed of the lime and refuse coke from gas works, and in a barrel there would hardly be found a trace of ammonia. The purchaser informs us that he has not perceived the slightest benefit from its use. We may analyze this article, and give its composition, and the names of those who are thus engaged in pludering the public.

Royal Agricultural Society's Dinner.—It will be seen by Mr. **Barry's** letters that a dinner was prepared for two thousand persons, for which as many tickets were sold at 10*s*. each, or about $2.50. This dinner was a grand affair, at which the Duke of Richmond, President of the society, presided, Prince **Albert** and other distinguished characters made speeches. We trust that a large and respectable dinner will be prepared on the occasion of the State Fair in this city, if a hall or tent can be procured that will seat one thousand persons at tables. Any smaller number will be likely to excite dissatisfaction.

Patent Office Agricultural Report.—We say to those who have inquired where this report is to be found, call on your Member of Congress. These reports are taken by Members of Congress for distribution. Farmers should see that they are properly distributed. We fear thousands of them that should be in the hands of farmers, are stowed away in dark corners as useless rubbish.

Farmers who may attend the State Fair, will find a large collection of agricultural books for sale at our office. Those entitled to premiums who have not received them, will find a good opportunity, if not attending themselves, to send by a friend.

Advertisements, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance*.

American Reapers at the World's Fair.—We have just received an account of the trial of McCormick's and Hussey's Reapers at London. It will be seen by the following statement, which we extract from a letter by **Horace Greely**, published in the Tribune, that the trial was made in, "*draggled, unripe grain,*" which will account for the failure of Hussey's Machine. We learn that another trial is to be made in ripe grain.

"A signal triumph for American ingenuity was accorded on Thursday. Mr. **Mechi**, formerly a London merchant, having acquired a competence by trade, retired some years since to a farm in Essex, about forty miles off, where he is vigorously prosecuting a system of high farming, employing the most effective implements and agencies of all kinds. He annually has a gathering of distinguished farmers and others to inspect his estate and see how his 'book farming' gets on. This festival occured day before yesterday—a sour, dark, drenching day—notwithstanding which nearly two hundred persons were present. Among others, several machines for cutting grain were exhibited and tested, including two (Hussey's and McCormick's) from America, and an English one which was declared on all hands a mere imitation of Hussey's. Neither the original nor the copy, however, appeared to have operated to the satisfaction of the assembly, perhaps owing to the badness of the weather and its effects on the draggled, unripe grain. With McCormick's a very different result was obtained. This machine is so well known in our wheat growing districts that I need only remark that it is the same lately ridiculed by one of the great London journals as 'a cross between Astley's chariot, a treadmill, and a flying machine,' and its uncouth appearance has been a standing butt for the London reporters at the exhibition.—It was the ready examplar of American dissortion and absurdity in the domain of art. It came into the field at **Mechi's** therefore, to confront a tribunal (not the official but the popular) already prepared for its condemnation. Before it stood John Bull, burly, dogged and determined not to be humbugged—his judgement made up and his sentence ready to be recorded. Nothing disconcerted the brown, rough, homespun Yankee in charge jumped on the box, starting the team at a smart walk, setting the blades of the machine in lively operation, and commenced raking off the grain in sheaf piles ready for binding, cutting a breadth of nine or ten feet cleanly and carefully, as fast as a span of horses could comfortably step. There was a moment, and but a moment, of suspense; human prejudice could hold out no longer, and burst after burst of involuntary cheers from the whole crowd proclaimed the triumph of the Yankee 'treadmill.' That triumph has been the leading topic in all agricultural circles. *The Times* report speaks of it as beyond doubt, as placing the harvest absolutely under the farmer's control, and as ensuring a complete and most auspicious revolution in the harvesting operations of this country. I would gladly give the whole account, which grudgingly toward the inventor, but unqualifiedly as to the machine, speaks of the latter as 'securing to English farming protection against climate and an economy of labor which must prove of *incalculable* advantage.' Very well for 'a cross between an Astley's chariot, a flying machine and a treadmill."

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American Plows in London.—On his arrival in London, our associate, Mr. **Barry**, found American plows, and other agricultural implements, the subject of ridicule in the Times, and the London press generally. None of the Americans at the exhibition took the least pains to defend them, or to explain their use in any way, appearing perfectly content to hear unjust ridicule and reproach without a word in self-defence. In this state of affairs, Mr. B. addressed a letter to the editor of the London Times, explaining the use for which some of our implements, particularly our plows, were designed, and claiming that they were in some respects equal, and in others superior, to anything in the exhibition—cheap, simple, and effectually accomplishing the object designed.—On publishing this communication, the editor of the Times remarked that undoubtedly the American plows would be found useful in some cases, and that Englishmen might study their construction with advantage. After this the Times gave up ridiculing American plows. Mr. **Barry** further recommended our one horse plows and cultivators to nurserymen, for culture between nursery rows; and before he left could have sold a large number, had they been in London, particularly to English and Scotch nurserymen. A trial of the American and foreign plows was made about the 20th of July, and we give the result as reported by **Greely**:

"Within the last few days, a very decided and gratifying change has taken place in the current of opinion here with regard to American invention and its results. One cause of this was the late formal trial of American (with other foreign) plows, in the presence of the agricultural jury; which trial, though partial and hurried, was followed by immediate orders for an American plow then tested (Starbuck's) from Englishmen, Belgians and Frenchmen, including several agricultural societies. If a hundred of these plows were here they might be sold at once; in their absecence, the full price has been paid down for some twenty or thirty, to be shipped at New York, and be thenceforth at the risk and cost of the buyers. And these orders have just commenced."

If the American commissioners had been acquainted with the agricultural implements of which they had charge, had explained their use, and defended them like men instead of acting as though they were ashamed of the American exhibition, or afraid to undertake a defence, the bragging and swaggering of the London press would soon have been stopped.

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Short-Horns.—Mr. **Geo. Vail**, of Troy, has furnished us with the following facts, which we publish for the information of breeders of cattle, that at his late sale, on the 26th June, he retained about 14 head of Short-Horns as the basis of his future breeding herd; most of these are his imported Bates cows, and heifers bred from them, got by his Bates bulls Duke of Wellington and Meteor. The heifers which he has reared from these cows have all been retained by him for breeding, except two sold at private sale on the day of his public sale, the 26th of June last, and these two were sold, one to Mr. **Remington** of Philadelphia, and the other to Mr. **Chapman** of Madison county, N. Y. Mr. **Vail's** premium bull Meteor will continue to be bred to the heifers of Wellington, and his fine bull Fortune to his Meteor heifers, till another appropriate cross can be had from England, where he now has an order for the purchase of a young Duchess bull out of the well known and famed Duchess cows bred by the late eminent breeder, **Thos. Bates**, Esq. He has also an order there for two heifers possessing the same blood. These orders it is expected will be promptly executed. In connection, it may be stated that in order to be able to supply the repeated and increasing demand for animals of this blood, he has added to his herd within a few days, eight cows and heifers, thorough-bred Durhams, possessing great substance, fine symmetry, and, so far as developed, good milking qualities, purchased from the Messrs. **Lathrop**, of Massachusetts. The most of these animals have the blood of the late Mr. **Bates'** herd through a bull owned by the Messrs. **Lathrop**, got by the bull Yorkshireman bred by the former gentleman, and imported by Mr. **Joseph Cope**, of Pennsylvania, in 1839.

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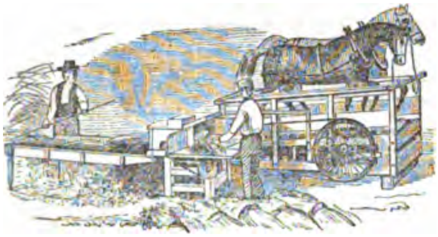
Agricultural Fairs.—*State Fairs* for the present year will be held as follows:

New York—at Rochester, Sept. 16, 17, 18, and 19.
Southern Central Agricultural Society—at Macon, Ga., Oct. 29, 30, and 31.
Ohio—at Columbus, Sept. 24, 25, and 26.
Michigan—at Detroit, Sept. 24, 25, and 26.
Pennsylvania—at Harrisburgh, Oct. 22, 23, and 24.
Vermont—at Middlebury, Sept. 10 and 11.
Canada—at Brockville, Sept. 24, 25, and 26.

County Fairs—as follows:

Allegany county—at Angelica, Oct. 1 and 2.
Chenango county—at Smyrnia, Oct. 1 and 2.
East Bloomfield Farmers' Club—at East Bloomfield, Ontario county, Sept. 24.
Herkimer county—Sept. 9.
Oneida county—at Utica, Sept. 8, 9, 10, 11, and 12.
Otsego county—Oct. 1 and 2.
Saratoga county—at Mechanicsville, Sept. 9, 10, and 11.
Seneca county—at Waterloo, Oct. 9 and 10.



EMERY & CO.'S

NEW YORK STATE AGRICULTURAL SOCIETY'S

FIRST PREMIUM

RAILROAD HORSE POWERS.

THE above justly celebrated Powers, as now made and sold by the subscribers, are offered the public with the assurance that they are all they are represented—they having been very extensively and thoroughly introduced and tested side by side with all the Tread Powers known of note in the country, and been preferred.

The Chairman of the Ag. Society's Committee on Horse Powers, in a communication written some months after the awarding of premiums to the above Horse Power, says: "I spent much time at the late State Fair (Sept. 10th) at Albany in examining the various Horse Powers, viz., Wheeler's, Allen's, Ham's, and Emery & Co.'s, first with the *owners and makers* and heard all they could say, and again in their abscence, and the result most fully convinced me that yours was the BEST, and if I wanted one, I would give TWENTY DOLLARS more for yours than for any other on the ground; and as you won your laurels fairly, it is just that you should receive a full reward." He further says, "You know from experience, I have no partiality for your establishment, and as a committeeman of said Society for years, I have decided oftener against you than for you; and if others have a better article than you I would decide in their favor though it ruined your establishment, and, vice versa, hurt whom it may."

With the testimony of such men as the author of the foregoing which together with changeable geering, and other important improvements since last season, make it the most *convenient, durable, efficient and economical* Power now made; and the public may rest assured of being furnished by us with a *superior* machine.

Having heretofore been obliged to have a large portion of some parts of our work done by contract, we have felt the inconvenience and want of dependence to be placed upon the quality of materials and workmanship; we have now so extended our facilities as to enable us to make all parts of all our own machines, and can now assure the public that none but the best work and stock will be offered by us

The Two Horse Power Thresher and Separators is capable, with three or four men, of threshing from 150 to 200 bushels of wheat or rye, and the single one from 60 to 100 bush., or double that quantity of oats per day.

The price for Emery & Co.'s one Horse Power,...	$85.00	
do do Thresher and Separator,.	35.00	
do Bands, wrench, oiler and extra pieces,.	5.00	—$125.00
do Two Horse Power,...............	110.00	
do do Thresher and Separator,.	35.00	
do Bands, oiler, wrench, &c.,.........	5.00	—$150.00
Price of Emery's Thresher and Cleaner, with bands, wrenches, &c.,....................................		$75.00
do Saw Mill, complete for use,..............		35 00
Price of Grant's Fan Mill, adapted for hand or power from..................................		$22 00 to 28.00

Also, Wheeler's Rack and Pinion Power, manufactured by ourselves, and warranted equal to any of the kind in use, (or made and sold by any other manufacturer,) which we sell with a full guarantee of the right of using the same in any territory of the United States, for the following prices:

One Horse Power,.................	$75.00
Two Horse Power,.................	100.00

All the above are subject to the warranty of three months use and trial, and if not satisfactory may be returned and full purchase money refunded.

Individuals wishing Emery & Co.'s Latest Improved Premium Horse Power, will be careful to observe that their name is cast in full on every link of chain and the wheel hub.

For further particulars see Illustrated Catalogue, furnished gratis on application to EMERY & CO.,

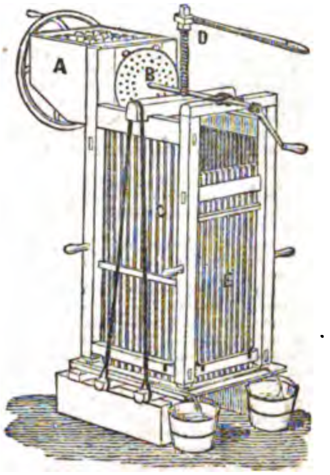
Original and sole proprietors of the Albany Agricultural Works Warehouse and Seed Store, Nos. 369 and 371 Broadway, Albany, N. Y.

The proprietors will exhibit their machines at the New York State Fair at Rochester this fall, and be prepared to take and fill orders; also at Ohio and Michigan State Fairs at Columbus and Detroit.

Choice Peaches for Sale.

A FEW hundred bushels of the best improved varieties of Peaches for sale by the subscribers. Persons wishing to purchase in large lots are invited to call and see them on the trees. They can then be sent at different times as agreed.

Walworth, N. Y., Sept. 1, 1851. E. & T. G. YEOMANS.



Chapin's New Portable Cider Mill.

THE inventor has much improved his Cider Mill the present season, and now offers two sizes, one designed for traveling over the country and making cider in the orchards, the smaller one is expressly adapted to hand power, and is just the thing for the farmer to have on hand for his own use

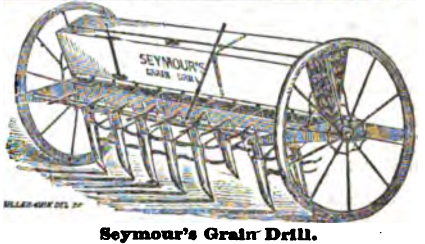
The present form of these machines, both large and small, by last fall's operations, have proved themselves much more practical than before the improvement. They are destined to an extensive patronage. Under ordinary circumstances, but one horse is required to operate or draw the large mill. With the help of two men and a horse, they go into the orchard and turn out from 12 to 16 barrels of cider per day.

Price, $125 with wagon wheels and thills—$100 without.

The Mills may be delivered without wheels and thills, and be furnished at their place of destination.

Two men may operate one of the hand mills, and make from 4 to 6 barrels of cider per day. About one barrel is made at each pressing. Price 40 dollars, with an individual right of using.

RAPALJE & CO., Rochester, N. Y.,
September, 1851. *Manufacturing Agents.*



Seymour's Grain Drill.

THIS machine has been in use several years, and is well known in Western New York, and is universally acknowledged to be the best implement in our country for the purposes for which it is intended. It has taken the first premium at three State Agricultural Fairs. Price, $70 for seven teeth, and $80 for nine teeth.

For sale by J. P. FOGG & BRO.,
Rochester, Sept., 1851. [9-1t] Opposite the Arcade.

Buffalo Nursery and Horticultural Garden.

THE proprietor of this old established nursery would call the attention of fruit-growers, nurserymen, and others, to the very large stock of Fruit and Ornamental Trees, Flowering Shrubs, &c., now offered for sale.

The stock of apple trees is unusually large and fine, comprising the most choice and valuable sorts; by the thousand at very low prices.

Pear trees, both standards and dwarfs, of the very best sorts for garden and orchard culture

Cherry trees—a very large stock of fine trees mostly trained with low heads. The most choice sorts are propagated largely.

Also, a very good assortment of the plum, peach, apricot, nectarine, quince, gooseberry, raspberry, strawberry, currant, &c., &c.

The assortment of Ornamental Trees, Flowering Shrubs, &c., comprises almost every desirable article.

Also, a large stock of Evergreen Trees by the hundred.

Roses, Dahlias, bulbs, &c., &c.

Stocks of all sorts for nurserys. Large importations are made from year to year.

All orders and letters of inquiry will receive prompt attention. Trees securely packed, carefully labelled, and forwarded with dispatch. B. HODGE.

Buffalo, N. Y., Sept., 1851. [9-2t*]

C. J. RYAN & CO.

OFFER great inducements to dealers in and purchasers of Fruit and Ornamental Trees, Shrubs, Grape vines, Ornamental vines, and Herbaceous plants. A select collection of Green-House plants on reasonable terms, principally such varieties as flower in the winter and early in spring.

20,000 Apple Trees, from 5 to 9 feet high, all straight, thrifty and beautiful trees, including all the popular varieties. Northern Spy in large quanties, low.

Cherry Trees—all the principal and leading varieties.

Pear Trees, on the Quince and Pear seedling stocks.

Apricot Trees, free from scale or blight. Varieties—Moorpark, Breda, Peach and Mammoth.

Grape Vines.—Isabella, Clinton, and Catawba. We have a large quantity of Isabella vines in good order for vineyards, or planting around dwellings.

Strawberry Plants.—Some twenty varieties. All the choice, productive, and marketable varieties by the quantity, low.

Ornamental Trees.—Pawlonia Imperialis, a most beautiful shade tree, extra large foliage, which affords shade immediately.

European Mountain Ash—straight stemed and headed.

European and American Larch—of all trees the most beautiful early in spring, if planted close to dwellings.

Catalpa Syringæfolia—very showy and beautiful.

Shrubs.—Wigelia Rosea, (Chinese Wigelia) flowered in our grounds this season. It is everything said of it, producing peach blossom pink flowers in clusters.

Forsythia Vividissima, or Golden Bell, another beautiful Chinese shrub.

Deutzea Gracilis Nova Japonica, new; Deutzea Conescens, Scabea, and Staminea.

5000 bedding plants in large varieties. Our collection of Verbenas, Petunias and Salvias, is unsurpassed.

Ornamental Vines.—Wistaria Sinensis, Calistegia Pubescens, Linesera flexuosa (Chinese honeysuckle), besides a number of others. Bignonia, Grandiflora, &c. Ivys, &c., &c.

Hedge Plants.—Buckthorn, Osage Orange, and Privet—strong plants which will make an appearance at once.

Spiraeas—Prunifolia flore pleno, Douglassi Lanceolata, Hyperiafolia, and a number of others. Our stock of the new sorts is large, particularly of Prunifolia flore pleno, will be sold low. We think, from the habit of it, it will make a most beautiful garden division hedge and bear shearing.

A large and select collection of Prairie, Bourbon, Noisette, Tea, Bengal, Hybrid Perpetual, Damask, Cabbage, and Moss Roses.—We are permitting our stock of June Roses to run out, unless something very superior, as there are a large number of most beautiful hardy Perpetual, and hybrid Perpetual varieties. Our Running Roses include all the new Prairies, raised by Messrs. Pierce & Teast of Baltimore, and others. Our general collection is very distinct. We are in favor of distinctness of character, and not names. Perhaps out of 1000 names there cannot be selected really 100 distinct varieties.

Rhubarb.—Giant Victoria and Collossal—will be sold low by the quantity. It is worthy the attention of market gardeners. It is an indispensible article for table use, and commands ready sale in all cities and towns.

See general descriptive Catalogue, and annual Catalogue.—Both can be had by post paid application.

Rochester and Charlotte Plank Road Nurseries, Rochester, N. Y., Sept., 1851.

Seneca Lake Highland Nurseries.

CATHARINE, CHEMUNG COUNTY, NEW YORK,

Near Havana Depôt, N. Y. & Erie R. Road.

LARGE size Fruit Trees, for Orchard planting, of all kinds.—Dwarf Trees, for yards, of the Pear, Cherry, and Apple, bearing size. Ornamental Trees and Shrubs, Decideous and Evergreen, Climbers, Grape Vines, Raspberries, Gooseberries, Currants Strawberries, Cranberry Vines, Green House Plants, Roses, and Dahlias.

The new and unequalled fall and winter Apples—Douse or Hawley, and Wagoner.

Nursery Stocks.—Persons wishing trees to plant or sell, are referred to this fall's descriptive catalogue for the great and unequaled inducements offered, as to *price and quality*, which will be furnished gratis, on application by mail.

Packages amounting to $10.00 will be sent free of charges, on the Erie Railroad, to New York and Dunkirk, or any intermediate station. E. C. FROST.

September, 1851.

Horse Power.

UNRIVALLED Horse Powers of all kinds, guaranteed the best in the United States.

1. The Endless Chain or Railway Power, of our own manufacture, both single or double geered, for one or two horses. These have never been *equalled* by any other manufacturer for lightness in running, strength, durability and economy. They are universally approved wherever they have been tried.
2. The Bogardus Power, for one to four horses. These are compact and wholly of iron, and adapted to all kinds of work.
3. Eddy's circular wrought iron large Cog Wheels, for one to six horses. A new and favorite Power.
4. Trimble's iron sweep Power, for one to four horses. Warren's ditto.

A. B. ALLEN & Co.,
[8-3t] 189 & 191 Water street, N. Y.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

A. SAUL & CO. have the pleasure to announce to their patrons and the public in general, that their stock of *Fruit and Ornamental Trees*, which they offer for sale the coming autumn, is of the very best quality and embraces everything in their line that can be procured in the trade.

Dealers and Planters of Trees on a large scale, will be treated with on as liberal terms as can be done by any establishment of *reputation* in the country. They flatter themselves that for correctness of nomenclature of fruits (which is a serious consideration to planters) that their stock is as nearly perfect as it possibly can be, having been all propagated on their own grounds, from undoubted sources, under the personal supervision of Mr. Saul.—They have propagated in large quantities all the leading standard varieties, which are proved to be best adapted for general cultivation, especially those recommended by the American Pomological Congress at its several sessions, as well as all novelties of recent introduction, and kinds, particularly suited to certain localities, and sections of the Union and Canadas.

Their stock of Pear Trees is the largest they have ever had to offer for sale, and among the largest in the country, and consists of over 50.000 saleable trees.

The stock of Apple Trees is also very large, as well as Plums Cherries, Apricots, Peaches, Quinces, and Nectarines. Also, Grape Vines, Gooseberries, Currants, Raspberries, Strawberries, &c. &c. &c.

Pears on Quince, Cherry on Mahaleb, and Apple on Paradise stocks, for pyramids and dwarfs for garden culture, and of which there is a choice assortment of the kinds that succeed best on those stocks.

DECIDUOUS AND EVERGREEN ORNAMENTAL TREES AND SHRUBS.

Embracing all the known kinds suitable for street planting, of *extra size*; also, the more rare and select, as well as all the well known kinds suitable for Arboretums, Lawn and Door-Yard planting, &c., including Weeping Trees, Vines, Garden and Climbing Roses in great variety. Hybrid Perpetuals, Hybrid Chinas, Hybrid Bourbons, Hybrid Damasks, Hybrid Provence, and Bourbon, Tea, China, and Noisette, and Prairie, and other Climbing Roses.

A large quantity of Arbor Vitæ for Screens, Buckthorn, Osage, Orange, and other hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere. For further particulars see catalogues, a new edition of which is just issued, and will be forwarded to all *post-paid* applicants by mail. A liberal discount will be made to purchasers who buy to sell again, and extensive planters on their own account.

P. S.—Freight paid to New York.

Newburgh, Sept. 1, 1851. [9-2t]

TO FARMERS, LUMBER MERCHANTS, &c.

SCRIBNER'S TABLE BOOKS for Farmers, Produce Dealers, Millers, Traders, Lumber Merchants, Mechanics and Business Men, are the most useful and popular Table Books published in the United States.

THE READY RECKONER.

For Ship Builders, Boat Builders, and Lumber Merchants, being a correct measurement of Scantling, Boards, Plank, Cubical Contents of Square and Round Timber, Saw Logs, Wood, etc., comprised in a number of Tables; to which are added Tables of Wages by the month, Board or Rent, by the week or day, and railroad distances. Also interest Tables, at seven per cent.

Scarcely is it possible to add to the recommendation of the above book, more than to give its title page. Every one who is engaged in buying, selling, measuring or inspecting Lumber of any kind, will at once appreciate a work of this kind. No pains or expense has been spared to make it in every respect convenient and accurate.

The log table has been computed with the most perfect accuracy and the method adopted by the author can result in nothing else than strict honesty to the parties interested.

In all new and lumber countries the book will be found very convenient, as it comprises much that is useful for the Farmer, Mechanic, and business man. Price 25 cts.

Orders solicited, and a liberal discount made to wholesale purchasers.

SCRIBNER'S PRODUCE TABLES.

For Farmers, Millers, Produce Dealers, and Mechanics, exhibiting at one view the value of more than sixteen thousand different quantities of GRAIN, computed at sixty pounds to the bushel, so arranged as to present on the same page the value of the whole number of bushels and pounds at the same price. Also, Tables of Interest, Scantling, Weights of Iron, and other useful Tables for all classes of business men. By J. M. Scribner, author of the Engineer's Table Book, Mechanic's Companion, &c., &c. The price of the book is only 25 cts., which is much cheaper than any book of the kind now published.

Agents are wanted to sell the above books in all the States. A liberal discount will be given to those who buy to sell again. Any person sending me *One Dollar* by mail, post-paid, shall have *five copies* of either of the books sent him free of charge. The books can be had of booksellers generally. GEO. W. FISHER,

Rochester, N. Y., Sept., 1851. Bookseller and Publisher.

TIMOTHY SEED for sale at No. 68 State street, Rochester, N. Y., by BRIGGS & BROTHER.

September, 1851.

C. M. SAXTON,
AGRICULTURAL BOOK PUBLISHER,
152 Fulton Street, New York,

PUBLISHES THE FOLLOWING

VALUABLE WORKS:

THE Complete Farmer and Rural Economist, and New American Gardener. By T. J Fessenden. In one volume, about 700 pages. cloth gilt. $1.25—mail edition, $1.00.

Johnston's Agricultural Chemistry. A new edition. In one volume. 12 mo. cloth gilt, $1 25 Mail edition, $1.00

Johnston's Elements of Agricultural Chemistry, 50c.

Johnston's Practical Agriculture. One volume, cloth, 75c.

Buist's Family Kitchen Gardener. Cloth, 75c. Mail edition. 50c.

Hoare's Treatise on the Cultivation of the Grape Vine on Open Walls, 50c.

Sheep Husbandry. By H. S Randall, $1.25. Mail edition, $1.00.

Stephen's Book of the Farm—complete, $4.00.

Browne's American Poultry Yard. Tenth edition, $1.00. Mail edition, 75c.

Allen's American Farm Book, one volume, $1.00. Mail edition, 75c.

Allen's Diseases of Domestic Animals, one volume 75c. Mail edition, 50c.

Chemistry made easy for Farmers—paper, 25c.

Southern Agriculture; or Essays on the cultivation of Corn, Hemp, Tobacco, Wheat, &c. $1.00.

Dana's Prize Essay on Manures, 25c.

Miner's American Bee Keeper's Manual, $1.00. Mail edition, 75c.

Brown's American Bird Fancier, 50c. Mail edition, 25c.

Canfield on the Breeds, Management, Structure and Diseases of Sheep, $1.00.

The American Architect—the cheapest and best work of the kind published in the world. Complete in 24 numbers, at 25c. each, or $5.00 for the work complete; $6.00 bound in two volumes.

Youatt & Martin's Treatise on Cattle, with one hundred illustrations. Edited by Ambrose Stevens, Esq. $1.25.

Youatt on the Breed and Management of Sheep, with illustrations, 75c.

Elements of Agriculture. Translated from the French, by F. G. Skinner. Adapted for Schools. 25c.

Gunn's Domestic Medicine; or, Poor Man's Friend in Affliction, Pain, and Sickness, $3.00.

C. M. SAXTON,
[8-2t] 152 Fulton street, New York.

Lands of Long Island,

ADJOINING the villages of Lakeland and Hermanville, about 48 miles from the cities of New York and Brooklyn, by the Long Island Railroad. The opportunity is now offered to all those who ever wish to obtain land on Long Island, the Ancient "Garden of America," that will probably never occur again, for these lands are the only remaining new lands on the Island, and are equal in quality, when cultivated, to any other land.

The results of cultivation on these Island lands have been so great, so much beyond the expectations of any one, that they are now considered of great value for farms and gardens, and will, in all probability, be all taken up for settlement and occupation, or be held at more than five times their present price. All kinds of produce may now be seen growing there, such as wheat, rye, corn, potatoes, and garden vegetables, with fruits and flowers, in the most luxurious growth, where but a short time since the land was covered with trees and bushes.

The surface of the ground is perfectly beautiful, free from stone or bogs or marshes, and the climate as healthy as can be found in this latitude. The soil is a fine loam, admirably adapted to high cultivation and great crops, and of easy tillage.

Indeed, no New England or Northern New York man can form any adequate idea of the great difference in the labor and strength requisite to cultivate these Island lands, and that required to subdue their own rugged lands, until he has seen or made the trial; and I now offer for sale as handsome land, and intrinsically as valuable, as can be found within fifty miles of the city of New York, in any direction, in lots of five acres or more, for the sum of $25 per acre.

Any person wishing to purchase a five acre lot of good and handsome land, without one foot of water or useless ground on it, can do so by sending $5 as a first payment, and the further sum of $5 a month, until one half is paid, when a warrantee deed and good title will be gived, and the remainder part of the purchase money may be paid or secured on the land, to be paid within three or five years, with 6 per cent. yearly interest. Larger lots will be sold on the same terms.

The title is perfectly good—I have a history or deduction of the title complete, certified to by legal men of the highest character, which I will send by mail with maps, pamphlets, and all information, to all purchasers, or those who wish to be informed of these Island lands, by applying to E. H PEAS, of Albany, or CHAS. WOOD, Stationer, 117 John street, N Y. [8-3t]

A. LONGETT,

COMMISSION MERCHANT, Office at the State Agricultural Warehouse, No. 25 Cliff street, New York.

☞ THE WORKING FARMER, a monthly publication devoted to Agriculture, &c., &c., edited by Prof. J. J. Mapes, and published by A. Longett, 25 Cliff street, New York. [7-4t]

Important to Farmers and Planters.

MESSRS. Editors:—Through your columns especial attention is directed to the following:

At the next Annual State Fair, to be held in Rochester in September next, I design to present for competition, a small *Steam Portable Grist Mill*, (conical Burr Stone.) got up in a much more simple and cheap form than has ever before been exhibited; and challenge all manufacturers of Mills, that I will operate a Mill *on the Fair Ground* with 25 per cent. less power than any other kind of mill that is made, doing the same amount of work in a given time.

CHARLES ROSS.

Rochester, N. Y., Aug. 6, 1851.

EXTRACT FROM THE TRANSACTIONS OF THE N. Y STATE AGRICULTURAL SOCIETY, 1848.

"Another labor saving Machine, useful to the stock feeder, was offered in a Portable Grist Mill, with Burr Stone, horizontally placed, and capable of grinding seven bushels of feed per hour.

* * * * * * * * *

"As ground food for cattle leads to rapid fattening, these, and such like machines, may well claim the farmers attentive consideration."

B. P. JOHNSON, Secretary.

Agricultural Rooms, Albany, Sept. 23d, 1850.

C. Ross—Dear Sir:—In 1849, the Committee says, that your Portable Grist Mill performs well, and has been so often commended, that this Committee think they cannot add to its reputation.

B. P. JOHNSON,
Sec'y N. Y. S. Ag. Society.

N. B.—This Mill has taken the highest premium at the State Fair for the last four years, it having been exhibited and worked by horse power, at Saratoga, Buffalo, Syracuse and Albany.

From the Georgia Telegraph.—Extract from Ex-Governor Troup's Communication:

Valdorta, Laurens Co., Ga.

Mr. Editor:—I have tried the Conical Burr Stone Mill, for grinding Corn, and have found it to answer admirably. No planter that is not in the vicinity of a public Mill, ought to be without one, if he can afford to purchase, and his family is sufficiently large to require the use of it, otherwise I would suggest that several Farmers of a neighborhood should unite to purchase one in common, which, being established in a central position, would be accessable to all. Very respectfully, G. M. TROUP.

☞ Any further information may be obtained by letter, post-paid, or by calling on CHARLES ROSS, Curtis Buildings, Rochester, N. Y.

TO WOOL GROWERS.

THE subscriber would again direct the attention of those wishing to improve their stock of sheep, to his flock of pure Merinos, believing them to be equal to any—producing as much wool of a good quality from a given amount of feed, as any flock that can be found. His flock consists of Ewes and a few Bucks bred pure from the importation of Consul Jarvis. Bucks and Ewes bred from Jarvis Ewes and a French Merino Buck purchased of J. A. Taintor, Esq.

Those wishing to purchase will do well to call and examine before purchasing elsewhere. Prices will be made reasonable, to suit customers For further particulars inquire of the subscriber.

A. H. AVERY.

Galway, Saratoga Co., N. Y., Sept., 1851.

Wanted.

WITHIN one, two, three, or four months at farthest, an honest, industrious young man, acquainted with the dairy business—that is, with the management of milch cows and selling milk in market. For such a one, I will give $180.00 a year, payable monthly, and will board the same at my own house free of expense. I will also give the same to a good gardener—one that is acquainted with raising vegetables for market. No one need be afraid of sickness in coming to Memphis. I have 25 in family, and have not had any sickness in five years. I do not believe there is a healthier place in the United States.

B. R. THOMAS

Memphis, Tenn., Aug. 3, 1851. [9-3t*]

New Oxfordshire Bucks For Sale.

THE subscriber has a number of yearling and two year old Bucks which he will sell any time when called for, and has no hesitation in saying that this breed of Sheep are superior to all others, for large carcass, heavy fleece, early maturity, and constitution, and defies competiton with all other breeds for profit. This flock, which has been bred from some of the best ever imported, is so well known they need no further description than to say that the sire clipped 18 lbs. of washed wool, and weighed 361 lbs. alive. Gentlemen are invited to call and see for themselves, or communicate by mail Direct to CLAYTON B. REYBOLD,

[6-4t] Delaware City, Delaware.

Horse Powers and Threshers.

WE have for sale Emery & Co.'s Premium Railroad Horse Powers and Threshers. A description of the principal parts of the Power may be seen in No. 3 of the Genesee Farmer for the present year. We have one of the machines up in our store, in running order, and we invite those who are intending to purchase Railroad Powers, &c., to call and examine this. We will put the Machine to work, for those who wish, free of charge, and warrant them to give satisfaction.

BRIGGS & BROTHER.

Sept., 1851. No. 68 State street, Rochester, N. Y.

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Fruit and Ornamental Trees, &c.

THE subscribers solicit the attention of Nurserymen, Orchardists, and Amateurs, to their present large and fine stock of Nursery Articles :

Standard Fruit Trees, for Orchards; thrifty, well grown, and handsome, of all the best varieties.

Dwarf Trees, for Gardens. The largest stock in the country, and the most complete.

Dwarf Pear Trees. Our collection consists of well known leading varieties, and numbers more than 150,000 saleable trees. The superiority of these, being grown in the country, over imported trees, is well known to every intelligent cultivator. Nothing, in fact, in this country, can equal our collection of Pear Trees. They can be had from one to four years growth, some of which are now covered with fruit.

Dwarf Apple Trees. We cultivate in large quantities the best and handsomest varieties of apples on Doucain and Paradise stocks for Dwarfs and Pyramids, and can furnish them in large quantities, from one to two years growth.

Dwarf Cherry Trees. All the leading varieties are cultivated on Mahaleb stocks, extensively. We can furnish by the hundred and thousand, from one to two years growth.

Cherry Currant, the largest variety known. Upwards of 1,000 plants on hand.

English Gooseberries, all the best sorts.

Large Fruited Monthly Raspberry, that gives a crop of fine fruit in the autumn.

Strawberries, all the best sorts.

Ornamental Shade Trees, of good size, for streets, parks, &c., large and well grown.

Choice Trees and Shrubs, for lawns and pleasure grounds, including all the finest, new and rare articles recently introduced.

Hardy Evergreen Trees. Norway Spruce and Balsam Fir, of small size, in large quantities; and a moderate supply of large ones, besides nearly *fifty new and rare Evergreens,* including Deodar Cedar, Cedar of Lebanon, Chili Pine, Cryptomeria or Japan Cedar, Himalayan Spruce, &c., &c.

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The following Catalogues, giving full information as regards terms, prices, &c., will be sent gratis to all who apply by post paid letters or at the office.

1st, a General Descriptive Catalogue.
2d, a Wholesale Catalogue,
3d, a Catalogue of Select Green House Plants.
4th, a Special Catalogue of Dahlias and Bedding Plants, for 1851.

ELLWANGER & BARRY,
Mount Hope Garden and Nurseries,
Rochester, N. Y.
Rochester, July, 1851.

Fruit and Ornamental Trees.

THE subscriber solicits the attention of nurserymen and the public to his present stock of trees, &c., which is finer and larger than at any other season, consisting in part of the following:

Standard Fruit trees of the best leading varieties.
Dwarf trees, for gardens.
Ornamental shade trees and shrubs.
Evergreen trees, larger than at any other nursery.
Roses, Pæonies, &c., with a variety of other articles generally raised in nurseries, all of which are offered at low prices.

Wholesale dealers would particularly find it to their advantage to purchase here.

CHARLES POWIS,
Monroe Nursery, Ridge Plank Road, near Rochester.
Greece, Sept., 1851.

Strawberry Plants.

EVERY family who have a rod of land, should have a bed of Strawberries. They are the greatest luxuries of the season, both for sick and well. The cultivation is simple, and the plants can be obtained at very little expense. If they are planted the first week in August, they will bear a goodly crop of fruit next year.

The following include the very best under cultivation :

Burr's New Pine—of the highest and most delicious flavor, uniformly, and productive.......	37½c.	per doz.	$1.50	per 100
Boston Pine—hardy, and exceedingly productive............	37½c.	"	1 50	"
Hovey's Seedling—a well known magnificent berry...........	37½c.	"	1.50	"
Rival Hudson—valuable for marketing and preserving, hardy and productive................	25c.	"	1.00	"
Bishop's Orange—productive and fine flavored...............	25c.	"	1.00	"
Large Early Scarlet—an excellent standard sort ; one of the earliest....................	25c.	"	1.00	"
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Alpine Red and White Bush.....	50c.	"	3.00	"
British Queen...............	37½c.	"	2.00	"
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Black Prince...............	25c.	"	1.00	"
Jenny's Seedling............	25c,	"	1.00	"
Prolific Hautboy............	25c.	"	1.00	"

Also the following fine new varieties, our own seedlings·

Climax Scarlet—light scarlet, rather acid, bears great crops.....	50c.	per doz.	3.00	per 100
Genesee—the finest looking of all the strawberries ; good size and flavor................	$1.00	"	4.00	"
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Orange Prolific—late,large and productive................	50c.	"	3.00	"
Ellwanger & Barry's No. 1—the highest flavored strawberry under cultivation............	$1.00	"	4.00	"

For more minute particulars, please refer to our Catalogue, which will be forwarded on receipt of post paid applications.

All post paid orders will receive prompt attention.

ELLWANGER & BARRY,
July, 1851. Mt. Hope Nurseries, Rochester, N. Y.

Walworth Nursery.

I HAVE on hand an extensive assortment of apple, pear, cherry, and peach trees of large size, and of the most desirable varieties for orchard culture. Also, a few thousand two and three years old *dwarf pears.* All of which will be sold at the lowest market prices, and at a great discount in large quantities.

Also, some apple trees of extra large size, and
40,000 apple seedlings, two years old, for sale.
Walworth, Sept., 1851. [9-2t] T. G. YEOMANS.

NEW YORK STATE FAIR, at Rochester, September 15th, 16th, 17th, 18th, and 19th.—The subscriber has been appointed local Secretary of the New York State Agricultural Society, at Rochester. Any inquiries respecting matters connected with the arrangements of the show grounds for the Fair, may be addressed to me. Persons having articles for exhibiton, who cannot accompany them to Rochester, can consign them to me, and I will see that they are taken proper care of, and the necessary entries made at the business office.

JAMES P. FOGG,
Rochester, July, 1851. [8-2t] Local Secretary.

The Practical and Scientific Farmer's Own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, Fruits, &c.

VOLUME XII, FOR 1851.

DANIEL LEE & JAMES VICK, Jr., Editors.
P. BARRY, Conductor of Horticultural Department.

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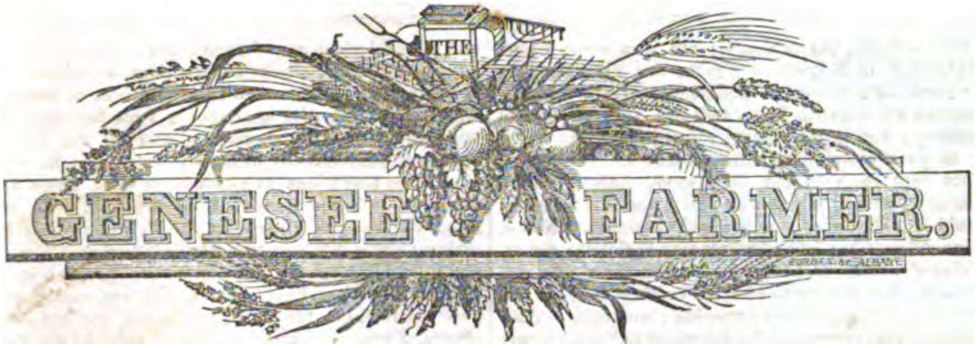


Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—OCTOBER, 1851. NO. 10.

PROFESSOR JOHNSTON AND AMERICAN AGRICULTURE.

THE London Farmer's Magazine for August contains a complimentary notice of a lecture by Prof. JOHNSTON before the New Castle Farmers' Club, in which we find the following remarks: "The most interesting part of the lecture is the discovery of some very fine beds of phosphorite in America." He says:—"It occured to me that there might be parts in North America where this substance could be found purer, and in larger quantities than in England. *I accordingly caused inquiries to be made, especially where quantities have been got. The result was that in two States of the Union deposits had been found, which though not quite pure, were nearly so.*"

From the above it appears that neither Dr. JACKSON, nor Mr. FRENCH of Boston, nor Dr. EMMONS of Albany, is entitled to the honor of discovery in finding valuable fertilizers in New Jersey and northern New York; but the "inquires were caused" by Professor JOHNSTON of England, and he alone is entitled to the credit of suggesting a critical search for phosphate of lime. We suspect that the claim of the Durham professor to originality in this matter is no better than that of his two volumes of "Notes on America" to truthfulness and intelligence. In making his book, he appears to have had a clear understanding of what sort of a story would best suit the English market, and wrote accordingly. Never was there a caricature of this country, particularly of its farmers, written, which was so generally applauded by all classes in Great Britain. Blackwood's Journal of Agriculture sneeringly remarks, in an eulogistic notice of Prof. JOHNSTON'S "notes." "Of the *agriculture* of America there is little to be said; and except *warnings*, nothing to be learned." Other journals, both literary and agricultural, praise the English professor, and express contempt for American agriculturists. Blackwood says: "A kind of listnessness creeps over the second and third generations of American born, both in the British Provinces and in the States." The "degeneracy" of the English, Scotch, and Irish, on emigrating to America, is a popular theme just now in Great Britain. Our extreme fondness for foreign goods and gew-gaws of all kinds, our servile adulation of itinerant "professors," lecturers, singers, dancers, play-actors and novel-writters, from Europe, naturally create the impression that we are an idle, frivolous people, a little soft in the head, and greatly deteriorated from our progenitors in the mother country. Had Prof. EMMONS made his valuable agricultural researches in England and gotten up two or three quarto volumes as he has in New York, American publishers would have had the work abridged, stereotyped, and in every book store in the Union. But we republicans, instead of encouraging science and researches in our own free land, allowed Mr. EMMONS' excellent journal of agriculture to die for the want of a reasonable support, while a foreign lecturer on agricultural chemistry was paid liberal sums in Boston, Albany, and Washington, to aid him in collecting materials to make American farmers the laughing-stock of Europe. So long as our own citizens who labor faithfully to develope the true principles of American agriculture are treated in this way, our common sense will be impeached by the best-informed nations. We must build up a literature of our own, or be the despised copyists and followers of Europeans. Mr. JOHNSTON makes the average product of wheat in the State of New York 14 bushels per acre; and that of New Brunswick 18 bushels. From these figures he gives the people of Great Britain to understand that the farmers of the British Provinces are twenty-eight per cent better cultivators of the soil than those of the States.

The Edinburgh Review for July says: "The cause of the apparent *deterioration* of settlers remains to be determined. Some imagine that the climate is unfavorable to the developement of the hardier and more pertinacious qualities of the Anglo-Saxon race." These remarks and others of a kindred character are made in a highly commendatory notice of the "Notes" of our Durham lecturer.

In his admirable work entitled "Democracy in America," M. de TOCQUEVILLE says that the United States are governed by an aristocracy of lawyers. Be this as it may, it is certain that the earnest recommendation of President WASHINGTON to Congress, to foster agriculture by establishing a national board, has been treated with contempt for more than half a century by our national legislature. France has her "Minister of Agriculture," and the representative of the Belgian government at the court of St. James is a practical farmer. In his speech at the dinner of the Royal Agricultural Society of England, M. VAN DE WEYER said: "It is a dangerous circumstance to enjoy an old established reputation for superiority, if, filling men with conceit and vanity, it prompts them to consider their *empiric traditions* as superior to the most positive discoveries of modern science. We have in [illegible]um happily escaped that danger, and all classes [illegible] have followed the *impulse given by the government.* Societies and public schools, (agricultural) are now every where established in Belgium. Tracts are circulated in our rural districts—new implements are imported—societies are organized to carry out your system of draining; and in fact, every effort is made to come up to your standard of improvements. I have no doubt that each of my colleagues, (other foreign ministers, among whom was Mr. Abbot Lawrence) would be able to draw a somewhat similar picture, because there are few governments that *have not established public institutions in which those who are destined for the agricultural calling may receive their instruction in all its branches*; and such is their praise-worthy eagerness for information from abroad. that in many a diplomatic dispatch, dissertations on the breeding and feeding of cattle, and on the draining and manuring of land, have usefully taken the place of the idle and dangerous political gossip of former ages."

This agricultural statesman—this educated practical farmer—made *the speech* of that great entertainment. Our minister spoke, but alas, what could *he* say in favor of the "public institutions" of any State in the American confederacy designed to teach the true principles of agriculture? Has Massachusetts one? Has New York one? Is there one founded by any government in the New World? We cling to the military statesmanship, and lawyer politics of Charles the II. Experimental farms and agricultural schools are incompatible with our "old established, empiric traditions;" and no legislature, either national or state, dare invade the feudal faith of the 17th century. If an American minister were to send home a diplomatic dispatch containing nothing but a treatise on manures and the breeding of cattle, politicians would demand his recall instanter. Some few friends of agricultural improvement in Congress proposed that the U. S. government should send a gentleman, (as the legislature of New York did) to represent the farming interests of the Republic at the World's exhibition; but the measure was voted down five to one, and this great national interest had no national representative there to see justice done to it. The secretary of the N. Y. State Agricultural Society, perhaps, did all that the public had a right to expect, under the circumstances with which he was surrounded; but the friends of agricultural progress in this country must have a more perfect organization, or we shall soon become the by-word of the civilized world and stand as a "warning" for our over-weening conceit and neglect of science. If we will not estimate the amount of fertilizing elements annually extracted from American soil and sent to the seaboard by our rivers, lakes, canals and railroads, *never to return*, foreigners will. In ten years, at the rate we are now extending our tillage, the injury done to our cotton, tobacco and grain lands, will involve a loss of at least five hundred million dollars. Had the United States a hundred agricultural statesmen where they have ten thousand mere politicians, what the soil annually parts with and what it gains would soon be known to every man in the Union, of common intelligence. The loss and gain in fertility in all arated, meadow and pasture lands, is a question of the highest public concernment. It is not enough to follow the the English practice and barely estimate the earthy ingredients removed in crops harvested, and in the grass eaten by cattle, [illegible]es, sheep and swine. In our hot summer clima[illegible]ot a little of the organic and mineral elements of vegetables is washed out of soils into ditches, creeks and swamps, by sudden and heavy rains. Of course all the elements of fertility which rise into the atmosphere from decomposing vegetation, mould and manure, and all the matter borne off mechanically in muddy water and in solution, is so much loss in addition to what crops and domestic animals remove from the soil. To our mind, the case is clear that the raw materials for making crops can never be properly husbanded, until not only all farmers, but the entire population of cities, villages, and agricultural districts, understand how the fruits of the earth grow, and the chemical effects of tillage. This knowledge they do not now possess, and never can acquire without due study and the needful opportunity. The principles of rural economy are as fixed and enduring as the rule of addition or any problem in Euclid. They can no more be changed in all time to come than iron can be transformed into gold, or dry sand into water. — There are many facts relating to cultivated plants and animals, which the wisest do not comprehend; but the things consumed by nature in forming their bodies are in the main well understood; and the principles deduced from well-established facts, are as certain as that fire will burn wood, or carbonic acid extinguish fire. Now, until all the ingredients necessary to form 100 pounds of grain, cotton, roots, hay, and tobacco, are generally known, they never can be saved from needless loss and waste. How can any person in town or country save ammonia, which is worth ten cents a pound for the production of wheat, before he has some knowledge of this substance as its elements exist in nature, and especially in his daily food? In the saving of this valuable element of fertility, neither English nor Scotch farmers do materially better than American. Hence the reproach of Messrs. Johnston, Blackwood and others, is alike uncalled for and offensive. Prof. Way estimates the fertilizers wasted every day in London as worth at least £2000 or $10,000. At this rate, the loss is a million of dollars every 100 days. It would be easy to demonstrate that the people of England throw away more of the elements of human food according to population, than the people of the northern states do in this country. At another time we may bring forward the statistics of this topic. At present we shall conclude by expressing our belief that as *artists*, American farmers are more skilful than any to be found on the east side of the Atlantic ocean. We have better implements of tillage and reaping, more active horses and oxen for plowing, and can produce 1000 bushels of wheat or maize, or 1000 lbs. of cotton or tobacco, with less labor of man or beast than any other nation in the world.— Never was a man more egregiously mistaken than Prof. Johnston in his views of American agriculture. We heard his lectures in Washington, and conversed with him on agricultural subjects, and saw that he had fallen into grave errors, but was so confident of the correctness of his opinions, that all idea of a change was hopeless. Englishmen have been over 20 years in this country without understanding either the citizens, the institutions, the soil, or climate of the United States. With such, all is wrong from the beginning to the bitter end. We have no unkind feelings toward Mr. Johnston.— With strong and incurable prejudices, he arrogates to himself a degree of consideration as a discoverer in the New World, quite ridiculous.

Editorial Correspondence.

P. BARRY'S LETTERS FROM EUROPE AND THE WORLD'S FAIR.

THE GREAT EXHIBITION.

Every arrival from England will carry you the intelligence that the exhibition continues to be eminently successful. There never has been such a rush as at this time, owing perhaps, to the additional attraction of the great Windsor Castle show.—Some idea of the increase of travel may be formed from the fact, that the North Western rail road alone presents in one week an excess of £16,000 ($80,000,) over the corresponding week of last year; other roads less than this, for instance, the Great Western $30,000, and the Great Northern $40,000, and this before the present rush.

London is such an immense place, that it swallows up 50,000 or 100,000 persons without apparently increasing the population, and so with the Crystal Palace—60,000 or 70,000 people can enter, and scatter themselves through the various departments in such a way that makes ample room for all. The most remarkable invention in the whole exhibition does not more excite astonishment than this wonderful capacity of the building, and the self-regulating power of that vast assemblage. Standing near the entrance, you will see people streaming in through several doors, and instead of all directing their course to one place, they scatter so completely, that in half an hour after the opening of the doors they are spread over the whole building. The diversity of objects exhibited, and of peoples' tastes and interests, account in some degree for this. Since I last wrote you I have taken a leisurely survey of the American department in the exhibition—indeed, I have spent a portion of almost every day in it. It is a much more meritorious exhibition than we get credit for. There are a multitude of useful and ingenious articles, but they are spread over so much space, and are arranged so badly, that they make a miserable appearance. The show of every other nation's goods is about as compact and as well arranged as the best ordered retail establishment in any city; but our articles are spread as if to make something of nothing, and they are placed, too, as if they had fallen into their places by accident.

I have heard it said that our commissioners were ashamed of the articles; but in my opinion they had much greater reason to be ashamed of the arrangement of the articles they had. Our exhibitors, too, have erred greatly in not sending with the articles a competent person to show them and explain their uses and merits—very few have done this. Agricultural implements, for instance, are shown pretty extensively by two or three parties, but they sent no one with them. Some agent was appointed in London, but he could not attend daily in the exhibition, hence no one could find out anything about them.—I have not seen, during all my stay, a single person to give any information about these implements, except in the case of one of McCormick's reapers, just arrived, in charge of Mr. D. McKensie, of York, Liv. Co., N. Y.

The expenses of our exhibition here cannot fail to be great, judging from the number of commissioners and assistants; and my conviction is, that the credit (?) we are earning is a poor compensation. I understand that an effort is about to be made to get out more articles, to fill up the space now empty. It is a pretty time of the day to think of this, after the exhibition has been open three months. It might very well, and ought to have been thought of two months ago.

Messrs. A. B. Allen & Co., of New York, show the most complete collection of agricultural implements, among which the light *one horse plows* attract the most attention. English agriculturists have never before seen so light an implement of this sort. Everywhere I see them use a heavy iron plow behind one horse in the culture of root crops. Already several gentlemen from Scotland have expressed to me their intention to procure one of these little plows.

Hussey's and McCormick's reapers, too, attract much attention, and may possibly be introduced into some parts of Great Britain. Their ridge and furrow system of culture will, I think, prove an obstacle to the use of such machines.

Our chopping axes, manure forks, and garden hoes, are also much admired.

There is a pretty good display of Cincinnati hams, with "directions for boiling." Spiced beef from Louisville and Chicago. Family beef from New York.

Samples of cotton from South Carolina, Georgia, and Tennessee, and a case containing samples of twenty or thirty different qualities from Jacobs, Truesdell, & Co., brokers, New York. The Atlantic dock mills, New York, *corn farina*. Colegate's *pearl starch*.

Mustard from M. M. Burrows, of Lexington, Ky., "peculiar for retaining its strength, purity, and pungency, in all climates. For these properties the manufacturer challenges the world."

A fine case of soda and water biscuit, and pilot bread, from Washington, D. C., by Havemer & Brother.

A jar of magnificent Ohio peaches, prepared by M. J. Louderback, of Cincinnati, "to be presented to the Queen."

Two small and very imperfect collections of autumnal leaves, from our native trees, one from Woodstock, Vt., and the other from Easton, Pa. The latter were named, the former not. If I had been in the commissioner's place I would not have exhibited either.

A cotton plant was exhibited from Alabama, with the cotton on it, ready for gathering. From the Pelham farm, on the Hudson, a very good collection of woods; but they were badly exhibited—thrown on the floor among flour barrels, minerals, &c., instead of being tastefully arranged in a case, or on a stand.

The Maryland committee exhibit in a beautiful oak and walnut case, arranged in excellent taste, a very complete display of Maryland productions. No other State has presented anything more satisfactory. It includes fourteen or fifteen kinds of wood, samples of wheat, oats, corn, and all grains grown in the State; paper, silk, leather, nails, iron and copper ore, machine and pressed brick, freestone, granite, marble, fire proof brick, types and castings, salt petre, stearine, magnesia, epsom salts, copperas, red lead, pelt, flax thread, sand for building, dye stuffs, tobacco, &c., &c. All these articles were shown in a very small space, but yet they conveyed a most satisfactory idea of the natural productions and manufactures of that State, and reflected much credit on them.

A very good collection of grains, perhaps the best from our State, was shown by **Thomas Bell**, Esq., of Morrisania; but we have no show of this kind such as we ought to have. Russia makes a magnificent display of grains, and so does Scotland; but I will refer to them hereafter.

Our Genesee flour ranks high, if it does not stand at the head, although from the continent there are some remarkably fine samples, and a multitude of exquisitely fine preparations from flour, such as maccaroni, vermicelli, and other forms of paste used in soups.

Among miscellaneous articles that attract attention for novelty and mechanism I have noted — a glass case containing the standard weights and measures of the United States, from Prof. **Bache**, of Washington. The weights are from 50 lbs. down to the one ten-thousandth of an ounce avoirdupois, and the measures from a half a bushel to a pint. A few coaches, buggies, sulkies, sleighs, &c., are exhibited, all admired for their elegance of finish and extreme lightness, but as a general thing the trimmings are two flashy, and lack that taste which we find among French carriages. I think Russia presents the finest specimens of a sleigh. Whitmarsh's portable bedstead was quite attractive. It can all be put in a box eight by eighteen inches, and weighs only 20 lbs., from the Patent merchandise Co., 249 Broadway. Another patent bedstead, the various parts of which are put together in a remarkably simple manner, without screws or bolts, was well exhibited, and appeared to excite much interest. A *circular office table* from the South Carolina Rail Road Co., Charleston, is a simple and beautiful thing.— The pigeon holes for papers, &c., revolves on a pivot in the centre of the table, and persons sitting writing can move it round as they desire. It is very convenient, and the workmanship excellent — very much admired. Several barrels of *shoe pegs* from New Hampshire, excited no little curiosity. In reply to the question, what would be done with them at the close of the exhibition? Some yankee replied that "they would probably be sold for seed oats." "Mr. **John Cain**, of Rutland, Vt., 'a native of the Isle of Man, now an adopted citizen of the United States,'" presents a case of white *stone pencils*, of which he sells about 3,000,000 annually — the case to be presented to the Prince of Wales. Several very pretty stoves and furnaces were exhibited, but of these the English show is exceedingly rich. Our pails and corn brooms have no competitors.

I must leave other articles unnoticed till a future letter. P. B.

Cutting Bushes—"Old of the Moon," &c.— I have heard of this before. My father used to cut some bushes at this time with success, and others have written and commented upon the subject, adding, "when the sign is in the heart." I do not mean to laugh at this idea, because I believe there may be truth and reason in it; but the truth and reason of it depend, I doubt not, on the fact that the willows on which Mr. **Curtis** experimented, (see Farmer, page 190,) had done, or nearly done growing. If so, it accords with my theory as a difference of a week or two in the time of cutting, will not essentially affect the results, especially in the latter part of the season, and with trees or shrubs approximating a full growth. H.

ANALYSIS OF THE PARSNEP — (Pastinaca Sativa.)

BY J. H. SALISBURY, M. D.

The specimens for analysis were furnished by Mr. Douw, of Greenbush. They were large, fleshy, crisp, and fine flavored. Length of root, 1 foot; widest diameter, 3 inches; average length of tops, 29 inches.

Per centage of water, dry matter, and ash.

	Roots	*Tops.*
Per centage of water,	90.550	89.125
" dry matter,	9.450	10.875
" ash,	.995	1.760
" ash in dry matter	10.529	16.184

Inorganic Analysis of root and tops.

	Ash of root.	*Ash of tops.*
Carbonic acid,	28.20	23.51
Silicic acid,	.65	.92
Phosphoric acid,	10.55	4.31
Phosphate of iron,	.70	1.43
Lime,	3.65	1.32
Magnesia,	1.60	.51
Potash,	8.50	5.33
Soda,	40.25	54.32
Chlorine,	.60	3.13
Sulphuric acid,	4.30	3.92
	99.00	98.80

The inorganic matter of this plant is rich in soda, potash, and phosphoric and sulphuric acids. The analyses will indicate the kind of manure to be used.

Proximate organic analysis of root.

	100 *grains of root.*	
	Fresh.	*Dry.*
Water,	813.125	
Fiber,	53.250	271.18
Sugar and extract,	88.000	466.03
Dextrine,	21.650	113.00
Casein,	1.500	7.93
Albumen,	9.250	48.84
Starch,	13.950	73.65
Resin,	.950	5.01
Gluten,	.400	2.11
Yellow coloring matter,	.200	1.06
Fat,	.225	1 19
	1002.500	1000.00

This root, as it will be seen from the analysis, is rich in sugar, dextrine, starch, and albuminous matter, which fits it well to serve as food for stock.

Early and Late planted Peas.—"Every thing in its time." In the spring of 1816, (I think it was,) the summer of which was known as "the cold summer," my father planted his corn at the usual time of planting, (there being a warm spell of a few days,) after which a cold wet time followed, in consequence of which much of the seed rotted in the ground, especially in the moister parts of the field. These were replanted afterwards, and at the time of hoeing, (cultivators were not then in use,) the second planting appeared far more promising than the first; and it was generally remarked that nothing had been gained, but much lost, by early planting. On account of the early cold in the fall, it was found necessary to cut up the corn at the ground to save it from the frost. Now the advantage of early planting was manifest. While the late planted was just beginning to be glazed, the early planted, in the same hills, or in adjacent hills, was nearly ripe.— The difference was fully equal to the difference in planting. I have noticed a similar difference several times since. Age seems necessary to the maturity of the crop. H.

Inquiries and Answers.

Messrs. Editors:—Your subscribers in this place would be very greatly obliged if you would state in the next number of the Farmer, the best method of supplying our apple, pear, peach, plum, and cherry trees, with the sustenance necessary to their healthy growth and early fruiting. We suppose the analyses of Prof. Emmons, found in Part V, Agricultural Reports, N. Y., indicate correctly the kind of food our trees require. But how shall we apply the phosphates, the magnesia, potash, soda, and the acids? is the question we want you should answer. Our town is new, the most of our fruit trees set last spring, our soil much of it a tenacious gravelly clay, with a few inches of vegtable mold on the surface.—On the banks of the Grand River, which meanders our town, the soil is a very rich alluvial, yielding large crops, of every vegetable or grain committed to its trust. A. G.—*Lansing, Aug*, 1851.

Your alluvial bottoms are doubtless rich enough in their virgin state, without any additional matter to supply all the wants of growing fruit trees; but uplands, and especially such as have been tilled, will contain less potash, phosphate of lime, and other earthy salts, than is desirable. Forest trees extract these minerals from the soil where they grow, and their ashes and leaves yield the best natural food for young apple, pear, peach, plum, cherry, and quince trees. Except on old and impoverished fields, rotten leaves or mold from some other source may be omitted, but ashes never come amiss on ordinary soils. They should be evenly spread at least six feet beyond the extent of the tree top all round from the trunk. In all soils that lack lime, this substance should be mixed with the ashes half and half. Do not be over-anxious to bring your trees into early bearing: this can be done by checking their growth. A tree that makes wood rapidly cannot at the same time organize a large crop of fruit. The science of root and top-pruning has for its object the wise adjustment of the wood-making and fruit-bearing functions of a tree. It is rare indeed that we find a fruit-grower who is master of this science, which implies a thorough knowledge of vegetable physiology and of the food of all trees and plants, as well as of the art of pruning. Those that know the proprietor of this journal, will not believe that any personal considerations could induce him to urge every one that has a fruit tree, or intends to have one, to study Mr. Barry's book on this subject, if it was not regarded as a truly valuable work. Feeling a deep interest in the success of fruit culture in the United States, we intend to review this performance at our earliest leisure. The fundamental principles of sylva-culture and fruit-culture should be universally known in this country; and our cheap Farmer, with the large experience and professional skill of Mr. Barry, is admirably adapted to the widest possible dissemination of knowledge on this branch of rural industry.

Messrs. Editors:—Our wheat has been injured very much in this section by what is here called the blight, or rot in the head. The first appearance of it is when the berry is in the milk. A single berry in the head turns white and soon spreads till from one-fourth to the whole of the head is dead. The wheat turns white and mouldy when affected, while the remaining part is good. Early winter and late spring wheat are least affected. The disease is quite general in the State, and the crops full half destroyed. Some varieties of spring wheat are injured more than others. On examining my wheat, I find under the husk, and near the joint, an egg, or maggot, in color like a flax seed, though less in size. In some straws, I find a small worm nearly white, and in some roots appearances of the work of insects, while many of the stalks with blighted heads appear good and free from disease. Many attribute the disease to atmospheric causes. If you can give us any information on the subject, it would be very acceptable to one of your readers at least. George Sikes.—*Sharon, Wis., Aug.*, 1851.

P. S.—Can you recommend any work that treats of insects that are injurious to the farmer. G. S.

Dr. Harris's work on the insects of Massachusetts is recommended to our correspondent.

Eds. Gen. Farmer:—As you give very good advice to your readers, and tell them how they can raise twice as much as they have been raising on the same quantity of land, please tell them how to get a good price for it after they have it raised. I would like to know whether one hundred bushels from five acres, at $1.00 per bu., would not be better than two hundred bushels, at 50 cts., from the same number of acres? Everything that is written in the Genesee Farmer is good advice to the farmer; but suppose every farmer in the United States was to adopt the plan laid down by yourself, the consequence would be double crops, and, in many places, more than four times as much wheat as there now is—and there is more raised now than the farmer can sell at a fair price. Please inform your readers how to increase the consumption. Probably they might feed it to stock; or, possibly, if there were more factories built and put into operation some would quit farming and go into more profitable business. The majority of the people of this country are farmers, and they certainly could do something if they only knew how. At any rate they could make laws that would operate more favorably on their interests than the present ones do. H.

Our correspondent asks one or two important questions. To prevent an over stock of wheat and other staples, the farmers must diversify their products—grow more wool, horses, mules, and hogs. Consumption will increase with production, provided the things produced meet the wants of the home and foreign markets. Mechanical and manufacturing industry ought to be increased and greatly extended in this country, as we doubt not they soon will be. Farmers pay too little attention to legislation, but it is a way they have, and it is not our province to find fault with them on that score. Their greatest error consists in cultivating too much land, not in growing too much wheat and corn, hay and potatoes, per acre. They foster all the agencies that tend to weaken the vital force in potato plants and deteriorate other crops, and study not the laws of nature and of nature's God, but the almighty dollar. Money, not wisdom, is what we seek. Nothing has been worse abused in this republic than the noble science of political economy. It is the football of pettifogging politicians.

Eds. Gen. Farmer:—Though neither an acquaintance or a subscriber to your paper, I presume so far upon the interest you are likely to feel in agricultural affairs, as to make the following inquiries. Having observed in an extract from the Genesee Farmer, that specimens of gypsum from Tennessee and Alabama had been examined, I wish you, as the most direct way of ascertaining the locality of the quarry, to inform me of the whereabouts, and all other particulars, of the gypsum found in Tennessee. The article has not been used in this section, so far as I know, and I am very desirous of making some experiments with it.

While writing, I may as well inquire whether it is the custom, in your State, to rely on volunteer clover, or whether the land is invariably re-seeded. Your attention to this matter, will confer a favor on a farmer. N. L. Thomas.—*Longview, Tenn., Aug.*, 1851.

No one depends on "volunteer clover" at the north, except so far as seed may fall from ripe plants and thereby reseed the ground. Clover seed is generally sown in the spring on winter wheat, say from the last of February to the first of May. It is sometimes put in with wheat in autumn. The gypsum alluded to was from Chattanooga, on the Tennessee river; but, as we have since learned, it came from western Virginia down the Tennessee river, and not from a bed in Tennessee. The article is pure and valuable.

Messrs. Editors:—Our cattle are dying with the bloody and dry murrain, and as I have not seen anything in your paper for its cure, or a preventive, I should like to know if there is any. Solon Harris.—*Lenox, Mich., Aug.*, 1851.

We have heard more than usual complaint, this season, of mortality among cattle, and should be thankful if some experienced stock grower would write one or two articles on the treatment of murrain. We shall discuss the subject in future numbers, and desire all the information within our reach for the benefit of our readers.

Eds. Gen. Farmer :—I have read the Farmer for some time past, and have been both pleased and instructed. In an especial manner have I felt a deep interest in what little has been said on the subject of *Sorrel.* I have a field the soil of which is composed of a gravelly and sandy loam, abounding in that pernicious perrenial, sorrel, which too often is the index to a poor, sour, and diseased state of the soil. Doubtless all land abounding in sorrel is more or less sour. To remedy this evil it is necessary to apply such manure or mineral as will neutralize the acid and destroy, or prevent. its formation in the soil. Some of your correspondents tell us that "caustic lime" will have this effect.—If so, will you please inform me what is the probable smallest quantity per acre that will destroy this troubler, and have a decidedly good effect upon the crop and soil ; and what is the best method of applying it. Your opinion thro' the Farmer, will be gratefully received, and much oblige myself, and, doubtless, others interested. Chas. B. Halstead.—*West Town, N. Y., Aug.*, 1851.

The quantity of recently slaked lime which can be profitably applied to an acre of land that lacks calcareous matter, depends entirely on the cost of the article. In some places, a bushel of fresh lime from the kiln may be had for eight or ten cents, which is near the field where the mineral is to be used. In other cases no lime can be had short of hauling it many miles, while it costs fifteen or twenty cents a bushel where burnt. An article that varies from six up to sixty cents a bushel, must be used as a fertilizer in all quantities, according to circumstances. Mr. Patterson, the celebrated breeder of Devon cattle near Baltimore, has applied 200 bu. per acre on 1000 acres, at a cost of 20 cts. a bushel, making the investment of $40,000 for lime alone. Before this application was made, the old tobacco-impoverished plantation bore little beside sorrel and sassafras ; now it yields from 20 to 30 bushels of wheat per acre and clover in proportion.—On sour soils we should not think of using less than fifty bushels per acre, and should much prefer one hundred.—All lands which are inclined to be wet, should be well drained before limeing. The lime should be spread broadcast and either harrowed or plowed in at the time of seeding. The oil of vitriol, or sulphate of iron, (copperas) with an excess of acid. is the most abundant source of sourness in soils, where there is not an excess of vegetable matter.—Lime takes up all the excess of acid, whether mineral or organic, and the salt formed with this alkaline earth is a valuable food of plants. There is a vast area of improved lands in this country that lack calcareous matter, which sooner or later will be supplied. In a soil that contains no lime, ten tons of carbonate, or five and a half of caustic lime added to an acre. will give but one per cent. ten inches in depth.—This quantity at least ought to exist in all arable soils.

Messrs. Editors :—I shall be greatly obliged if you will inform me, through the columns of the Farmer. some method of destroying May weed in wheat. Oscar F. Haley.—*Springport, Mich., July*, 1851.

May weed, like many others, is not easily eradicated.—Pains must be taken never to let a plant shed its seed on the ground ; and then so soon as all in the soil have germinated, no more will grow. The seeds of weeds should be kept off the land—out of the earth—to prevent their injury to crops. It is a serious loss of labor, and waste of money, to permit weeds of any kind to go to seed, and allow their ripe seeds to be scattered by winds, birds, the plow and harrow and in dung spread over fields, until the whole farm is as foul as it well can be. Cut all weeds when they first come into blossom, and never allow one to mature its seeds. This, with clean tillage, will soon eradicate them.

Messrs. Editors :—Will you, or some of your correspondents. furnish to the readers of the Farmer, through its columns, a plan of a rat-proof granary of suitable size for an ordinary farm, with dimensions, capacity, &c. You will thereby greatly oblige at least one of them.

Waukesha, Wis., Aug., 1851.

Messrs. Editors :—I have a boy 14 years old that wishes to become a complete, practical, and scientific gardener, nurseryman. and farmer. Doubtful of my own ability properly to direct his course, I take the liberty to ask you for information on the subject. Will you advise me whether to put him with some good nurseryman, or send him first to an agricultural school, and if the latter, where can I find one that will be within the reach of a moderate purse ; or, in other words, what course of study and practice do you advise for the purpose mentioned, and where can the education be got ?

The crops in the northern part of Illinois are about as follows : Wheat, spring, about half a crop—a better yield than for the last two years. The Hedgerow wheat has generally suffered from the blight. The Rio Grande, and other sorts, but little. Winter wheat. where sown, has generally turned out a fair crop, though but little of it sown—not one farmer in fifty sowing any winter wheat in this country. Oats have produced enormously—there never was a better crop. Indian corn will do well where the land has been well cultivated. From the constant rains much of the corn land has been suffered to be overrun with weeds. Barley has proved a good crop, tho' but little of it grown. Potatoes early planted, and late planted, are almost entirely struck with the rot. Of fruits, apples are about the only crop that have done well, and there are so few orchards that they do not amount to much. Pumpkins, and kindred vines, have done nothing. Hay abundant.

N. B.—Twice as much corn and oats ground planted here this year than usual ; a much less quantity of wheat sown. A decided improvement. C.—*Junction, Ill., Sept.* 2. 1851.

We have many letters asking advice about the professional education of sons and wards ; and few men have labored more earnestly, or longer, to promote the establishment of good agricultural schools in different States. Why cannot the intelligent and enterprising farmers of Illinois get up such an institution ? The nursery business pays well in the hands of men who really understand it, and are good financiers ; and for many years to come, forest-culture will be a profitable pursuit, for the present generation is death on American forests. Science will have to repair at some future day, the damage done by ignorance at this time, and in preceding years.

Messrs. Editors. — In looking over some books &c. one day, I found a piece in the Genesee Farmer, vol. 8, page 275, which has interested me considerable, headed "Northern Rice." I have a piece of land at the foot of a swamp. which is overflowed by the water from it, the swamp has ditches in it, which convey the water through the piece of land ; but there being high ground around this lot it leaves no chance for it to drain, and in the spring it looks like a lake. However, I have dug a ditch nearly six feet deep, from it through the high ground, (it being of the hardest gravel,) which drained it last spring in time to sow oats on all but two acres, which is very low in the center of the lot, it will however get dry in August. From what I can learn, I should think the wild rice would grow there well. Can you or some of your correspondents inform me, and others in the same predicament, whether the land is suitable for it or not, the mode cultivation, where the seed can be obtained, how much per acre, what the grain would be worth in market, and oblige a subscriber. Henry C. Adgate.—*East Bethany, Gen. Co., N. Y., July*, 1851.

Eds. Gen. Farmer :—Will you, or some of your numerous correspondents, publish in the Farmer the proper time for suckering corn. with regard to growth and not date, as it ripens earlier in some sections than others.

Again : Notwithstanding much has been said in regard to swamp muck, still I am in doubt as regards its utility as a manure. I have several acres by the side of a pond, which has been for several ages accumulating, and is from one to twenty feet deep. I have dug and put in piles, but it does not rot. Will some one who understands its nature please inform me how I can make it useful as a manure. Is there anything that I can mix with it to cause decomposition ? S. Wheelock.—*Calais, O., July*, 1851.

Messrs. Editors :—I wish to gain some knowledge with regard to Mustard raising. I am a young farmer and therefore require the whole proceeding, from planting until ready for market. William P. Schenck.—*New Washington, Crawford Co., O.*, 1851.

Messrs. Editors :—I shall be greatly obliged if you will inform me through the columns of your valuable paper, of some method of killing Tanzey. I have a small patch which does not appear to spread unless plowed. It has been plowed for a number of years, and if you, or any of your many subscribers, can give any information on the subject, you will greatly oblige a Subscriber.

Salt it well and it will die. Mowing and burning, if practicable, will aid in destroying it.

S. W.'S NOTES FOR THE MONTH.

The World's Fair and the Yacht America.—The eclipsing character of the American people for labor-saving inventions, and time-saving locomotion, could not be better illustrated by a volume of argument, than by the premiums given at the World's Fair to Mears & Prouty's Plow and McCormick's Reaper. As if to put the *rub* on, or as the French say, *mis le comble*, to American triumphs in the premises, aquatic England is all astounded at this time by the superior fleetness of an American Yacht ; and what is the most wonderful of all is, that instead of a close race, where Greek meets Greek, the triumph of the Yankee is set down not by fathoms, but by miles and leagues. With a generosity truly admirable, the American Yacht instead of taking the wind of John Bull, which she had a right to do, courteously passed to leeward of the chase relying on her superior fleetness to bring her to windward again.

The foray on Cuba.—The country laments the sad fate of the brave, but deluded, men who embarked in the Lopez expedition to revolutionize Cuba. Much indignation is expended on the very few American newspaper editors who falsely represented the inhabitants of Cuba as being in revolt against Spain. But methinks it is as well to leave these men to their own remorse, which, at this time at least, must be sufficient for them.

Our Cereal Crops.—A masterly farmer from the rich and fertile plateau of Romulus, comes down upon me with a wet sail for saying too much in favor of our present wheat and Indian corn crop. So far as relates to wheat, I plead guilty of a want of correct advices, at that time; it is now pretty generally conceded that the wheat crop is below the average of good crops, in Seneca county at least. I still contend that Indian corn is, or might have been under proper culture, a large crop. In twenty years I have not had as large a growth of well filled ears as at the present season. But, perhaps there never was a season since 1816 when corn needed more attention, in order to secure the maximum yield. Even a dry, well manured soil would have failed, this cool, wet season, to fill the ears well, had not all barren stalks and suckers been early removed. Corn thus treated, will fill better stand both drouth and wet better, and ripen a fortnight earlier than corn in the next row equally as well hoed, if suffered to go unshorn of suckers and barren stalks. I have no need to dilate on the philosophy of this theory, as repeated experiment has placed the fact beyond question.

Farmers Products — Prospects of Prices.—When the prices of breadstuffs rule high in New York, the consumption of flour, even at home, is infinitely less, and the export to foreign countries nothing, compared with the great export under the present extreme, and I may say unprecedented, low prices. Our export of the products of the United States from New York alone, for the month of July this year, amounts to nearly three and a quarter millions of dollars. During the past year France has been our greatest competitor in the supply of wheat and flour to England. But at the present extreme low prices in the United States, France will hardly compete with us ; the result will be that our export of wheat, flour, and Indian corn, the coming year, will be unprecedently large, and the longer low prices rule, the greater the export, and the more the market will be relieved ; so that those farmers who have good wheat will be safe in holding it for an improved price. I take it that the ultimate point of depressed prices is already reached, from whence a rise is certain. Indian corn, heretofore unused and almost unknown in Great Britain, is now received there from the United States to the amount of millions of bushels ; and as a shipper of this cereal the United States has no competitor. Our own home consumption of breadstuffs is enormous and daily increasing. Perhaps no country on the face of the earth ever progressed faster in commercial enterprise and manufacturing industry than these United States—no country can boast of the same rapid increase of fixed machinery. Our cotton fabrics compete successfully with those of England in many foreign markets. New England manufactures eight million pounds of wool from Ohio alone. Our shipwrights, founders, and machinists, furnish steam ships, steam engines, and machinery, to many foreign nations ; even the two little towns of Waterloo and Seneca Falls already manufacture fabrics of cotton, wool, and iron, to an amount approaching a million of dollars annually.

My last "notes for the month" were shorn of some remarks on the pertinacity of certain political economists who gave the reader one side of the picture, which mystified, rather than elucidated, the other.—I may be wrong, but I cannot resist the idea that our agricultural papers are a little too thin skinned when they demur to a summary of current events, merely because an incident in political economy is attempted to be explained, palliated, or controverted. *Waterloo, N. Y., Sept.*, 1851.

Peat as a Manure.—At a "Farmers' Club," held in W. in the winter of '49, the subject of peat being under discussion, one gentleman remarked, that when a youth, he assisted his father in removing from its bed, about a hundred loads of peat, which they spread over a field the soil of which was a sandy loam, the sand being in excess. It was taken out in the fall, thrown in small heaps about the field, and left in this condition till the time of plowing in the spring, when it was spread over the ground and plowed under, and the field was then planted with corn. During the whole season they watched for the effect, and "tried to believe" that the corn was *a little* better on that part of the field where the peat had been thrown, than on other portions. The second season showed a manifest, though not a great difference ; and the third, a greater ; and so on, increasing for several years ; and for twenty years, a difference was distinctly discernable in favor of the portion of the field on which the peat had been thrown. He attributed the small advantage for the first few years, to the presence of an acid in the peat, which was gradually neutralized by the summer sun. The addition of a quantity of lime would doubtless have rendered it immediately beneficial. H.—*Down East*, 1851.

THE CAUSE—AGAIN.

Eds. Gen. Farmer:—I most heartily concur in the sentiment "that agriculture has been too much neglected in this country, and has been considered a matter of too little importance to attract the attention of scientific men." Our farmers, too, may not have "properly respected their calling," and the "sons of farmers, possessing the most inquiring minds, may have abandoned the occupations of their fathers to engage in other pofessions or pursuits." Let us suppose also, that the reverse of this has been existing among the farmers of England and Scotland; yet instead of admitting it to be the cause, I consider it to be only among the consequences growing out of the cause, which has retarded our farmers in the march of agricultural improvement, the cause itself still existing, the subject of the most interesting inquiry. – That inquiury has long engaged the attention of many of the best men of our country; it has long been made the subject of special examination by committees, in both our national and state legislatures. And the only conclusion they have ever arrived at by their examinations, has been "that our farmers are wanting in some peculiar kind of education. Mr. Barclay, a distinguished Scotch traveller, imputed our backward state of agriculture to our peculiar soil and climate. Mr. Nicholas Biddle imputed it to the peculiar pecuniary circumstances of our farmers. Professor Johnston imputed it to some peculiar characteristic of our agricultural population. The cause, however, can not be imputed to a want of education, as in this respect our people exceed those of Europe, and Mr. Cobden has very recently admitted that our peasantry are as far above those of England and Scotland in point of education, as they are behind them in the state of agricultural improvement. It can not be imputed to soil and climate, as ours though better on an average, than that of England and Scotland, in New England it is not so. It can not be imputed to pecuniary circumstances, for while the farming in England is carried on by the tenantry, it is here carried on by the land owners themselves. It cannot be imputed to any national characteristic, as in no other respect except in agriculture have our people shown themselves inferior to that of any other people in the world. It cannot be imputed to the fact that all our farmers are ignorant of the agricultural improvement in Europe, for Mr. Barclay tells us, that in visiting several intelligent Scotch emigrants, he found that instead of their having profited by their knowledge of the improvements in agriculture in Scotland, he found them to have degenerated into the system they found in operation here. The course what ever it may be, must arise from some circumstances in which the people of those countries are differing materially from us. What those circumstances are, is most desirable to ascertain. To increase the spirit of inquiry upon that subject, is one of the objects I have in calling public attention to it in the way I do. If it is a fact, as I understand you (Mr. Editor) to more than intimate, in the July number of your paper, "that the pursuit of agriculture is more honorable or profitable in England or Scotland than it is here," that alone would be circumstance enough to place us far behind them in the state of agricultural improvement. If such should prove to be the fact, the next inquiry would be, whether that is a cause admitting of a remedy. To ascertain that fact, it would be most desirable that some one acquainted with the minutia of the farming in the different countries should favor us with a comparison. An Old Farmer.—*Hillsdale, N. Y., Aug.*, 1851.

AGRICULTURAL EDUCATION.

Eds. Gen. Farmer:—In 1833 a bill was introduced into the Legislature of this State, providing for the establishment of a State Agricultural School. Its necessity was pressed upon the Legislature as the great and important remedy for the backward state of our agricultural improvements. The bill, however, received very little favor or notice from that Legislature. In 1834 the subject was again pressed upon the legislature, by quite a number of petitions, but the agricultural committees in each branch refused to consider it favorably. The friends of the measure then procured the appointment of a joint committee, composed of five members of the house, and three of the senate, to whom it was referred. By them the subject was discussed in all its bearings, and a report was drawn up, expressing certain sentiments, and concluded by recommending the passage of the bill of 1833. Thomas Hertell and Charles L. Livingston, of New York, John Suydam, of Ulster, and one other of the committee signed the report; but Albert H. Tracy, and two others (the latter both farmers,) refused to do so. Having the honor to be one of the committee myself, and although I disapproved of some of the statements expressed in the report, and of some of the details in the bill, after some hesitation, I was prevailed upon to sign the report, which gave it a majority of the committee. The subject, however, received very little favor in either branch of the legislature, and died without even a discussion. It become from that time, however, a subject of much interest to me, and I have never heard it agitated by legislators, travellers or others without giving it my serious attention. That the subject of agricultural improvement is one of the greatest importance, every body must concede; that it is a subject difficult to be understood, the great diversity of opinion will demonstrate; that it is a subject that may be understood, I candidly believe; that a right understanding of it is necessary to elevate the agriculture of our country to its proper position, there cannot be a doubt; that a national agricultural congress, such as you mention in the August number of your paper, in which all the interests of agriculture would be discussed, would do much to elicit that light necessary to a right understanding of the subject, I am much inclined to believe, and as far as my humble influence is concerned, I am ready to join in recommending its adoption. To interest farmers in the subject, a system should be devised, and presented for their consideration. There should be town, county, state, and national associations. — Farmers should be taught that, whatever their numbers in the nation, without the aid of associations all their efforts to any end, are exerted only as individuals, and of course impotent. Whereas, in the midst of associated deliberations, the wisdom and experience of all the farmers of the country may be concentrated in devising the means of agricultural improvement, and the influence of all may be exerted in procuring such acts as may promote their interests, and in opposing such as may work their injury. John F. Collin.—*Hillsdale, Columbia Co., N. Y., August*, 1851.

WINTER WORK, &c

Messrs. Editors:—It is a good maxim and a just rule, that every one ought to contribute something for favors received, and especially agriculturists, who are very much dependant upon the experience of others, as set forth in the various agricultural works among us, for a judicious improvement of their own means. And now that winter is about setting in, farmers are called upon to make a change in their business; instead of hauling manure, ploughing and making under-drains, &c., we are to turn our attention to the stock, to see that all have good fare, warm shelter, plenty of straw for beds, salt in their troughs, and many other matters that seem small, but by spring will amount to much.

My method of doing up the winter work is this: I stable all my neat stock, nights and stormy weather, from the begining to the end of winter. My sheep, about one hundred and twenty-five, are furnished with sheep-barns, the lower story of which is made of good mason work, from four to five feet high, with hay-loft above and gangway through the center, through which fodder is conveyed into boxes made after the most approved plan—the boxes making a division of the flock, say twenty-five in a pen, with a yard attached for each flock, with plenty of water, which makes it very pleasant caring for the flock, with a great saving of fodder. Thus situated, lambs can be raised at any time of the year. Mine are dropped about the 20th of March, the yearning season being over with and the lambs all smart before turning to grass. No running out in a cold storm in May to gather them up—no soaking in warm water and rolling them up in flannel, &c. We keep two span of horses. The large span is not put up winters at all, but run loose in the yard and under sheds, with coarse feed until near spring, when they are fed right and are new again for spring and summer work. By the way, the wood is all got up when it is good wheeling in the summer, and the boys go to school in the winter—that is all.

My farm consists of one hundred and fifty acres, all surveyed off into lots, with a map of the whole, by H. L. **Smith**, surveyor. All the lots, with the exception of the orchard, are more or less under-drained, with the very best results. In the December number of the Farmer, I noticed a communicatin from C. W., Lake Grove, giving it as his opinion that filling up the ditch within one foot of the surface with small sized stones is the best way of making under-drains, giving as reasons: 1st, That it is cheaper. 2d, That it is not so liable to be filled up by rats and mice.

In the first place, very much depends on the scarcity or abundance of the material; for myself, however, I am not convinced of its truth under any circircumstance. In the second place, that rats and mice are not as likely to fill it up as they are throat drains; I am not a convert to any such theory, having had too much practice in making under drains to believe that rats and mice will dig two feet below the surface to fill up a throat four inches square where there is a good current of water, and not dig one foot and fill in earth so as to stop the water where it must run very sluggishly, to say the least. Another objection to having the stone so near the surface is, *my* plow would come within one or two inches of the stones and make it liable to wash through, and then an end to the drain; and subsoiling would be out of the question. My experience in draining, brought me to the conclusion that a drain three feet deep, with sloping sides ten inches at the bottom, with a throat from four to six inches, covered as it should be, is the best. A. **Manley**.—*Clarkson, N. Y.*

The following interesting article on *Sewerage* was sent us by a friend, with a request to publish. It is taken from a London paper.

A Sewerage Experiment.—Lately, Mr. **Richard Dover**, of 29 New Street, Spring-gardens, exhibited to a party of gentlemen at the Essex wharf, Temple pier, his proposed plan of deputrifying and rendering available for agricultural purposes the sewerage of the metropolis and of large towns. Mr. **Dover**'s apparatus is exceedingly simple. In this case a large tank capable of holding 300 gallons was erected over the Essex street sewer, just where it flows into the river; and this, by means of a hand pump. was rapidly filled with water of the filthiest description, and of a most loathsome smell. The deputrifying ingredients (which cost, it was said only 6d.) had been already placed in the tank, and the sewerage, as fast as it flowed into it, was deprived of its offensive, but, agriculturally speaking, its valuable particles, which were at once precipitated at the bottom. A stop cock was then turned, and the fluid making its way through a filtering medium placed in a second tank beneath the first, was exhibited, in a somewhat turbid state, it was true, but perfectly void of the unpleasant odour which it had possessed a minute before, Another filtration rendered the water perfectly clear and limpid. The deposit which had been left at the bottom of the first tank was removable by withdrawing a plug, and by a process, also proposed by Mr. **Dover**, who explained, to be convertible in three days into a black powder as portable and inoxious as soot or lime, whilst its fertilizing power was said to be little inferior to the Peruvian guano. The experiment appeared to be perfectly satisfactory, and the plan feasible enough. The plan appears to solve the question of what shall be done with the sewerage of London. without resorting to the costly and difficult expedients which are component features of other schemes. Mr. **Dover** calculates that by his plan a handsome revenue would be derivable to the different municipalities. He proposes that they should let off the works to private speculators by public auction; and he estimates that the profits from the twelve sewers in the late Westminister commission would be £200,000 per annum. He rates the value of the manure arising from the population of the United Kingdom at £52,000,000 a year, most of which is at present wasted, but might be saved by the adoption of his proposals: and he thinks that the government might derive a revenue of more than £8,000,000 from this source. But this would seem to be the least advantages of the plan.—With "British guano" at £5 per ton, the farmer of this country could, in the opinion of the highest authorities, grow wheat at a profit for 40*s*. per quarter and the crop doubled. Here, then, is affording "relief to British agriculture," by which a most important step would also be taken to improve the sanitary condition of our large towns; and all without costing the rate-payers a single shilling, or advancing the price of a poor man's loaf, a single penny.

Gapes in Chickens.—*Messrs. Editors*:—A correspondent writes from Pennsylvania, asking how to prevent gapes in chickens. I have kept fowls for 28 years. I raise from 12 to 60 chickens a year, and keep from 22 to 60 fowls over winter, and never have had any have the gapes. Last fall my son exchanged some chickens with a neighbor, and in a few days one was attacked with the gapes. I used Cayenne pepper ground fine, with lard, but with no effect—it died in three or four days. Last fall I inquired of my neighbor's son whether they had raised many chickens. He said he could raise but few, for they died of the gapes.

When the chicken is hatched I remove it from the nest, and with my thumb nail I pinch off the little shell on the point of its beak. Let them eat anything that they will—Indian meal wet with water, I consider best. J. S. C.—*Bentonville, N. Y.*, 1851.

EXPERIMENTS.—POTATO ROT.

In the Mass. Ploughman is a brief article from a correspondent who, inquiring about the cause of the potato rot, says, "his potatoes have not rotted, while all the fields around him are badly affected." As a remedy he used "a gill of salt and a little plaster on each hill." He does not know "whether his success is owing to the salt, the plaster, or both united; to a new soil, absence of barn manure, or a mixture of various kind of potatoes planted together."

My object in this communication is two-fold; to urge upon farmers the necessity of careful experiments; and also to suggest a plan by which the experiments of others, or any other important practical hints may be rendered available for future use.

1st. Experiments; enough has doubtless been said on this subject to render further remarks unnecessary, if due attention were paid to what has already been written. The subject however, seems to require "line upon line," as the above experiment shows. The experimenter does not know, &c.— Then what is the use of the experiment? It has settled no disputed question, and the world is very little wiser than it was before. Experiments should always be made for the purpose of settling some doubtful or disputed point, in regard to the subject to which they relate. To have rendered the above experiment serviceable to others, or even to the author himself, some variety should have been used, for which there was abundant room in the use of the two substances; thus, commencing at one side of his field, he should have used, say, on the first row salt, on the second plaster, on the third the mixture, and on the fourth nothing; and continued this succession several times, either on the same side, or in different parts of the field. This would have gone far towards determining the value, absolute or relative, of the different substances applied. To render such experiments still more satisfactory, it would also be necessary to regard the different kinds of soil, and how the results were affected by this difference. The labor would be trifling compared with the value of the results; much less than it would appear from reading this direction. The record might either be kept in writing, in a small book kept for the purpose, or by setting up at the end of the rows, sticks suitably marked, and secured in their places, and should be made *in the field and at the time* of making the application; that there might be no mistake.

2d. How the experiments of others, and other valuable hints may be rendered available. This suggestion may appear superfluous; and yet it seems to be necessary from the frequent inquiries for information that has already been given. My plan is, to take a small blank book, (a sheet of fool's-cap folded in octavo form and stiched together will answer,) put down in this any hints that may be offered, or suggested, in regard to the management or cultivation of any vegetable; (I keep no animals;) any new thought gathered from reading or conversation; experiments intended to be tried, &c. I would say, keep also on some part of it an index, or reference table, by which not only any subject in your agricultural papers, (for I take it for granted you preserve them,) but also any new and important thought you may meet with in the body of an article, may be found by having in your "memorandum book" a record of number, page, &c. A valuable hint, experiment, receipt, &c., is often found in an "old newspaper," or fragment of one. Cut it out and fasten it with a wafer in a blank book, or on a blank leaf of a book, where it can be referred to when wanted; and make it a part of your business occasionally to look over your papers, (having had them bound,) in order to revive your recollections of those subjects that most intimately concern you. H.—*Down East, Aug.*, 1851.

AGRICULTURAL CIRCULAR FROM PATENT OFFICE.

The Commissioner of Patents has issued a Circular desiring farmers to furnish answers to the following questions:—the replies to be forwarded before the 1st of January, giving the name of Post office, County, and State from which the answers are sent. The U. S. Census will furnish reliable data as to the quantity of grain and other crops, the number of domestic animals, &c., so that such questions are omitted in the circular.

Wheat.—Is guano used in the production of this crop? And, if so, what is the gain in bushels per 100 lbs. of the manure? What the average product per acre—time of seeding and of harvesting—preparation of seed, and quantity used per acre—how many times and how deep do you plow—is the yield per acre increasing or dimishing—your system of rotation in crops—best remedies for Hessian flies and weevils—average price at your nearest market in 1851.

Corn.—Is guano used in the production of this crop? If so, in what way is it applied? What is the gain in bushels per 100 lbs. of guano? State the average product per acre—cost of production per bushel—state the best system of culture—best method of feeding, whether whole or ground, cooked or raw. State, if you can, how much grain the manure formed by ten bushels of corn consumed by hogs will add to an acre, if carefully saved and skilfully applied, at or before the time of planting.

Oats, Barley, Rye, Peas and Beans.—Average yield of these several crops per acre—quantity of seed used—which crop least exhausting to land—are peas cultivated as a renovating crop, and, if so, with what success?

Clover and Grasses.—Quantity of hay cut per acre—best fertilizers for meadows and pastures—the grass seeds preferred in laying down meadows—cost of growing hay per ton.

Dairy Husbandry.—Average yearly produce of butter or cheese per cow—comparative cost per lb. of making butter and cheese—treatment of milk and cream—mode of churning—of putting down butter for market—average price of butter and of cheese.

Neat Cattle.—Cost of rearing till 3 years old—usual price at that age—value of good dairy cows in spring and in fall—how many pounds of beef will 100 lbs. of corn produce—will a given amount of food yield more meat in a Durham, Devon, or Hereford, than in a native animal? How do you break steers to the yoke?

Horses and Mules.—Is the growing of these animals profitable? What is the expense of rearing a colt or mule until three years old? How should brood mares and colts be treated? What is the best way to break young horses and mules for service.

Sheep and Wool.—Is wool-growing profitable—cost per lb. of growing coarse or fine wool—how many pounds of wool will a ton of hay produce—are large or small sheep more profitable either for their mutton or for their fleeces—how much more does it cost to produce a pound of fine Merino than of ordinary coarse wool? The proportion of lambs annually reared to the number of ewes.

Hogs.—What the best breeds—the cheapest method of producing pork and bacon—how many lbs. of meat will 100 lbs. of corn yield—the best method of putting up pork, and curing bacon and hams.

Cotton.—Average yield of clean cotton per acre—cost of production per lb.—what crops best grown in rotation with cotton—best preventives against rust, army and boll worms—how deep do you usually plow for this crop; have you any experience in subsoiling or deep tillage for cotton—your experience in the use of cotton seed as a fertilizer—how can cotton lands best be improved without resting them? Is guano used; and, if so, with what result?

Sugar Cane.—Is the cane losing its vital force and becoming more subject to premature decay than formerly—should not the seeds in place of rattoons be occasionally planted to produce new and healthier varieties—can you suggest any improvement in cultivation of the cane, or the manufacture of sugar—cost of producing sugar per lb.? Is guano used; and, if so, with what result?

Rice.—Can rice be succesfully cultivated on upland—do you know of any varieties decidedly superior to others which deserve increased attention—can you suggest any improvement in the management of rice plantations? Quantity grown per acre.

Tobacco.—Average yield per acre—cost of production per cwt. or hhd.—describe any new process of cultivation or curing—crops best grown in rotation to maintain the fertility of tobacco land. Is guano used, and with what result?

Hemp.—Is the culture of hemp on the increase or decrease. Describe any new process of culture or preparation for market—average yield per acre—cost of production per lb.

Root Crops, (Turnips, Carrots, Beets, &c.)—Is the cultivation of these roots, as a field crop, on the increase—can you suggest any improvement in preparing land, seeding, after tillage and feeding? Average product per acre.

Potatoes, (Irish and Sweet.)—Average yield per acre—cost of production per bushel—most prolific and profitable varieties—best system of planting, tillage, and manuring.

Fruit Culture.—Is the culture of fruit receiving increased attention—cannot apples enough be grown on an acre to render the crop a very profitable one to the farmer—comparative value of apples and potatoes for feeding hogs and cattle—what varieties best to keep for winter use and for exportation—do you know any preventive or remedy for the "blight" on pear and apple trees, or the "yellows" on peach trees? The best method of transplanting, budding, grafting, &c. Make any suggestions on the culture of *grapes*, and other fruit—the manufacture of *wine* and on *forest culture.*

Manures.—What is regarded as the best plan of making and preserving manures from waste—are *lime* and *plaster* used as fertilizers—if so, in what quantity, and how often applied—is *guano* used, and with what success? Quantity usually applied per acre.

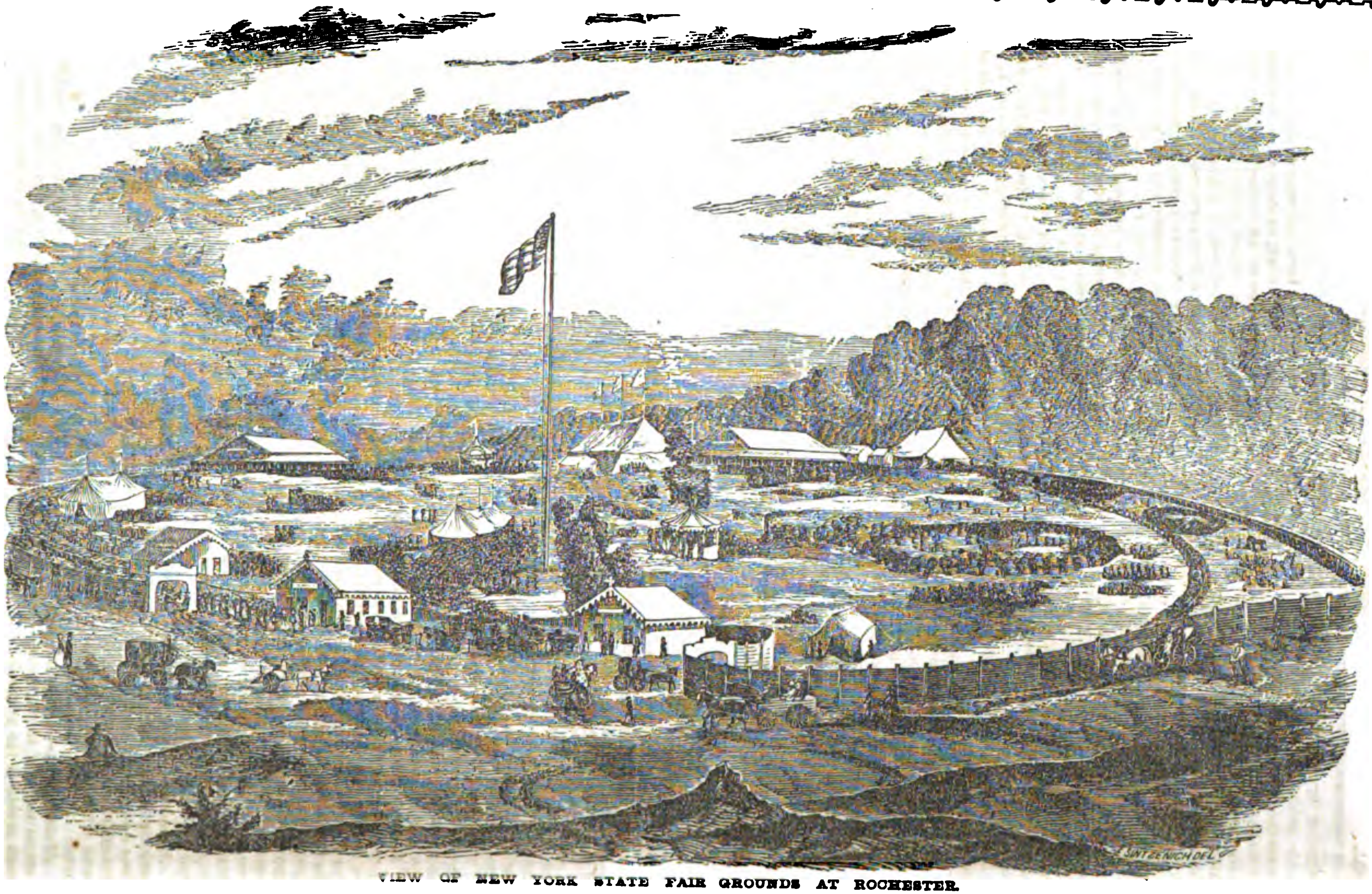
Meteorology.—Time and degree of highest and lowest range of thermometer—mean temperature of each mohth in the year—fall of rain in each month, and aggregate for the year.

"PLOW DEEP."

FOR three seasons I have had opportunity of testing the value of deep plowing, or digging, in our kind of soil. In the summer of '48, I tried it with potatoes, by planting them on a black, tenacious, alluvion, covered and partly mixed with a gravelly, sandy, hard-pan soil taken from a ditch eighteen or twenty inches deep, that was dug through a bog, or mud-hole.—The potatoes, in size, quantity and quality, were superior. In the *fall* of '49, I had a small patch of meadow land plowed for a garden. The ground had once been an *elder swamp* situated nearly on the top of a hill of considerable extent and elevation. It had been partially drained and used several years for a garden, but was abandoned as too wet. The soil is black, somewhat tenacious, twelve to fifteen inches deep, covering a sandy, gravelly, sub-soil. It was plowed again in the spring of '50, but not deep enough to disturb the sub-soil; planted with corn, potatoes, beans, peas, &c. The corn did well, potatoes grew well but rotted; the beans were tolerably good, but the peas were a very light crop, (straw large.) Last spring ('51,) plowed again, deep, but not to reach the sub-soil; and planted as before.—A ditch was dug along one side, and enough of the sub-soil thrown up to cover a strip five or six feet wide to the depth of two or three inches. Corn on this, as in other parts of the garden, nearly destroyed by wire-worms; potatoes look well, beans do., and peas have done exceedingly well, *far* better than last year, pods large and full. The same kind of peas, (marrowfat,) each year, and the difference of the seasons not sufficient to account for the result. I attribute the improvement wholly to the intermixture of the surface and sub-soils. H.—*Down East, Aug.,* 1851.

UNEQUAL MATURITY OF DIFFERENT PARTS OF A POTATO.—Some time since, a correspondent of the Genesee Farmer, advanced the idea of the unequal maturity of the two ends of the tuber. It was a new thought to me, and doubtless correct; as the enlargement of the tuber is made at the further end, just as a branch of a tree grows by elongation; and it is plain, that the end of the tuber, like the end of the branch, is the least mature, until ripened by a full, complete, natural process, just as a branch completes its growth by the formation of a perfect bud. Yet, that the end of a branch is not as thoroughly matured as its base, is evident from the fact that it is often killed in winter, while the base remains uninjured. The potato tuber shows the unequal maturity by the unequal degree of adhesion of the cuticle, or outer skin, on the two extremites. The tuber may be considered ripe when the cuticle adheres firmly to every part of it. Whether this immaturity of the tuber has contributed to the production of the "rot," appears rather doubtful, from the fact, that the immaturity of other seeds does not appear to operate unfavorably to their growth and perfection of their product. If a seed is sufficiently ripe to grow, its product is found to be good. That the tuber is not a seed, seems incapable of affecting the result. H.—*Down East,* 1851.

FRYING FRESH FISH.—Never put them into cold fat. Let the lard, or butter, be first heated to a degree just short of burning, and then plunge in the fish—the greater the quantity of fat, and the quicker the fish are cooked, the better they will be.



VIEW OF NEW YORK STATE FAIR GROUNDS AT ROCHESTER.

TENTH ANNUAL FAIR OF THE N. Y. STATE AGRICULTURAL SOCIETY.

Taken as a whole, the Exhibition just closed in this city, indicated a steady advancement in all the important features of farm implements and the arts of husbandry. Stock breeding, in particular, evidently commands increased attention. The show of Devons has never been approached in numbers, nor equalled in excellence. One gentleman who was a large exhibitor, and constantly on the ground, estimated their number at 500 ; we thought 350 nearer the truth.—Mr. Wainwright, of Duchess, exhibited an imported bull of a light red—a very popular color in England—which was a most beautiful animal, as may be inferred when the reader is informed that the owner refused $300, which were offered for him.—He took the first premium among Devons over three years old. The same gentleman was honored with the first premium on Devon cows.

Col. Sherwood's bull, "Earl Seaham," took the first premium in class A. as the best Short-Horn over three years old on the ground. Mr. Morris, of Westchester, received the first premium on cows in this class, and the second on bulls.

Mr. Ayrault, of Geneseo, won the prize on Hereford bulls, and Mr. Prentice, of Albany, that on Ayrshires. The exhibition of Neat Cattle was very creditable to the State, and their number was not less than 700. Mr. Wadsworth, of Geneseo, took the first premium on working oxen.

It has always been a source of regret to us that so few dairy cows are to be seen at these annual shows. No other domestic animal is more useful, or better deserves every possible improvement. The fat cattle were all that the most fastidious taste could desire. The Hon. Adam Ferguson, Messrs. Wade, Gapper, and others, of Canada West, honored the occasion by exhibiting several attractive animals from that province. We hope ever to see a kindly feeling cultivated between the people living under the two governments ; and we have reason to believe that such a wish is the prevailing sentiment, alike in the Canadas and the United States.

The high price of good horses, and the liberal premiums of the Society, have operated to turn public attention to the rearing and improvement of this class of animals. In skilful hands with sufficient means, the production of horses promises to be very lucrative. There was a large number exhibited, and not a few deserving of notice and commendation ; but we have no room in this paper for particulars. Mr. R. F. Pennell, of Somerset, Niagara Co., took the first premium on brood mares ; and a special premium was awarded to "Morgan Hunter." Mr. Burnett's thorough bred horse, "Consternation," having by previous premiums been excluded from the list of competitors, received a certificate as the best horse of his class on the ground. Of matched and single carriage horses there was a fair display.

Sheep were abundant, particularly long and middle wooled. The show of Saxons and Merinoes was smaller than usual. Mr. D. Hillman, of Avon, took the first premium on Merino bucks, and Mr. Church, of Vernon, Oneida Co., took the first premium on Saxon bucks. Of mutton sheep, our Canada friends exhibited several pens of fine animals. Mr. Gapper and Mr. Pierce were among the most successful competitors from Canada West.

Swine did not attract particular attention, although there were about the usual number on exhibition, and some were all that could well be desired in the hog line. It is to be regretted that so little attention is paid to the actual cost of growing pigs, sheep, and wool, per pound.

Of Poultry, there was a good show. The Executive Committee appear to think Malays and Dorkings are the only fowls worthy of encouragement.—We shall say something further in our next, on this point as well as others.

The Plowing Match was quite spirited, and Mr. Alex. Rumsey, of Ogden, took the first premium.

In no other department was improvement so conspicuous as in that of Agricultural Implements. It would fill a volume to describe those which were really meritorious. Mr. McCormick was present with his world-renowned Reaper ; Mr. Ketchum, of Buffalo, with his admirable Grass-cutter. Steam engines were travelling about on wheels, over rough ground, as steadily as ox-carts ; and wheeled cultivators, gang plows, seed drills, clod crushers, grain threshers and separators, straw cutters, draining tile and pipe machines, harrows, plows, shovels, axes, hoes, ox-yokes, and farming tools of every description, were shown in almost endless variety. Messrs. Rapalje & Co., of Rochester, were the most successful competitors.

In Manufactures, the display was not what it ought to have been. The dust, however, and the rough handling to which fine goods are occasionally subjected by the million, doubtless prevented manufacturers from sending in their best goods for exhibition. Mr. Barton, of Rochester, made a fine display of edge tools. Mr. White, of Buffalo, deserves notice for a similar exhibition. Stoves of every description were shown ; and many of them were alike beautiful and useful.

The show of Fruit we have never seen equalled. Messrs. Ellwanger & Barry exhibited over 100 varieties of pears, and a large number of apples.—The nurserymen and fruit-growers in the vicinity of Rochester, prosecute their business with a degree of talent, energy, and success worthy of all commendation. Nor are those who reside elsewhere in Western New York undeserving of praise ; but it is not our province to attempt a critical award of professional claims to each. There are several gentlemen from whom we should have rejoiced to hear public lectures on fruit culture, during the Fair. The occasion should be improved to communicate orally to thousands, with specimen trees, both for root-pruning and top-pruning, and specimen fruits before the lecturer, a large fund of practical and scientific knowledge. We sought *instruction*, and got very little ; and others fared no better. This business should be managed better in future.

Nothing pleased us so much as the sight of so many sober, intelligent, and happy people ; of whom 100,000 or more visited the exhibition.

The address of Senator Douglass was very well received, particularly by free-traders. It was mainly devoted to political, rather than *rural* economy.—Independent of its political character, the discourse abounds in useful suggestions. It has been extensively circulated in newspapers.

There were over $15,000 received at the Fair for tickets of admission, and for membership ; and as the city of Rochester paid all the incidental expenses (some $6,000) the Society has saved a handsome sum after paying its numerous and liberal premiums.

Horticultural Department.

EDITED BY P. BARRY.

IMPORTANT DISCOVERIES.

If indications be correct, some important discoveries in horticulture are on the eve of being promulgated. The *Curculio* is a great and almost universal destroyer of plums, apricots, nectarines. Even cherries, and apples do not wholly escape its ravages. Thousands of remedies have been tried, and all heretofore, excepting catching and killing, have proved fruitless. Recently, however, an annoucement has been made through the Horticulturist, by Mr. Wm. Quant, gardener to W. C. Langley, Esq., of Long Island, that he has discovered a remedy that has proved completely successful. He says :

> Mr. Langley has an extensive and beautiful plum orchard, and this year in particular, it was loaded with fruit, all the trees bearing about equally. For an experiment, I commenced the application with a quill of a *new composition* on *three trees*. The result is worthy of being seen. There is not a plum in the orchard, except on these three trees, they having fallen off, destroyed by the insect. To one of the three I shall be obliged to apply props, otherwise it will break down. I can only add that I am convinced that my composition is a radical exterminator. I shall keep its nature private until practical men, and others interested, are satisfied. Mr. Langley's place will be open for the public to examine for themselves, after which my receipt shall be open to the world. The compound for 100 trees would not cost over eight dollars. It is applied with a syringe.

What gives us great doubts about this is, that it has only, according to this statement, been successful *one year*. We know many cases this year where plum trees that have not borne for years are breaking down under loads of fruit, and that too, when others beside them have none whatever. We trust it may prove effectual, but we have small hopes. If Mr. Quant's discovery be as he seems convinced it is, "a radical exterminator," it should make him a fortune, and earn for him an elevated position among the benefactors of the age. The ripening and preservation of fruit, and especially pears, is another subject on which there is a great lack of information, and it is a subject of vast importance to this country. We have the soil and the climate to grow enough for all parts of the world ; but the great questions how *they are to be preserved* and *conveyed to market* are yet to be satisfactorily solved. Mr. Daniel T. Curtis it appears has been giving the subject some attention, and we believe his experiments have been to some extent successful. We saw last February, in the Mass. Hort. Society's rooms, *Seckel* pears in a good state of preservation from him, and we heard in London much said of the *Easter Beurre* pears he had sent them in April last. The fruit committee of the Mass. Hort. Society have taken up the subject. It will be seen from the following report, copied from the Transactions, that they consider Mr. Curtis' discoveries important ; but ask time to submit it to further tests.

> At a meeting of the Society, May 31, the following report from the Fruit Committee was read by the chairman, accepted, and ordered to be printed :
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> The Fruit Committee, to whom was referred a communication from Daniel T. Curtis, in respect to a method discovered by him for ripening and preserving fruits, has been referred, ask leave to report at this time, but in part, upon the subject committed to them. Specimens of fruit, consisting mainly of pears, have repeatedly during the past year, been placed upon the tables of the society by Mr. Curtis, that had been preserved by him for a long time after their usual period of maturity, that were found on examination to be perfectly sound, and, in some instances, to have retained unimpaired their juice and flavor. Among these pears were specimens of the *Seckel*, *Bonne Louise de Jersey*, *Duchess d' Angouleme*, and *Easter Beurre*. The *Seckels*, though a kind peculiarly subject to early decay, were perfectly sound, and retained in perfection the peculiar flavor of that variety.—Of the other varieties, the specimens exhibited were generally, though sound, insipid and tasteless, arising from the circumstance, as Mr. Curtis stated, and as their appearance indicated, that they were when packed, and subject to his process, immature and imperfect. These pears were exhibited by Mr. C. as late as January and February, months after their usual season of ripening, thus proving, as no signs of decay were visible, that their season could be almost indefinitely prolonged.
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> Mr. Curtis has sent pears, preserved and packed in his peculiar method, to Havana, to London, and San Francisco, thus subjecting his method to the most severe trials. The following extract from a letter from his correspondent at Havana shows the result of the experiment, so far as the shipment to that city is concerned : "Pears arrived in perfect order ; I never thought they could be eaten in so perfect a state, except in the country where they grow."
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> The Gardeners' Chronicle of April 5th, states that at the exhibition of the London Horticultural Society, April 1st, a box of fifteen *Easter Beurre* pears, received from Mr. Curtis, of Boston, were exhibited ; that cases containing seven of these pears were opened, and of them four were found to be decayed and three good ; and then states, "These pears were stated to have been ripened by a method peculiar to Mr. Curtis : the nature of which was not explained. They were for the most part melting, sweet, and perfectly ripe, a condition which this fruit with difficulty attains with us in England." The society awarded Mr. Curtis its Knightian medal.
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> The California Daily Courier of April 8th, acknowledges the receipt, through Mr. D. H. Haskell, of Adams's Express, of a magnificent pear, as sound as when packed at Boston. The Pacific News, Alta California, and other San Francisco papers, make similar acknowledgments, and all concur in stating that the pears were perfectly sound, and that as they were sent for the purpose of testing the practicability of sending fruit to California, across the Isthmus, speak of the experiment as successful. These pears were shipped at Boston, January 27, and after a detention of seventy days, arrived in California in April. These papers referred to, state that the pears, though sound, were deficient in flavor, a circumstance to be imputed, as with those exhibited to the society, perhaps to the immature and imperfect state of the fruit when shipped, and not to the effect of the passage or a difference of climate. From the facts now detailed, as well as from their own observation, your committee feel justified in expressing a confident opinion, that after many unsuccessful trials of various processes and different methods, Mr. Curtis has succeded in discovering a method of preserving fruit for a very long, if not for any desired period, and that this method is capable of a practical application.
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> Although Mr. Curtis has, as he states, preserved other varieties of fruit besides pears, yet so far as the personal knowledge of the committee extends, the fruit subjected to his process has thus far been mainly of the latter description, and they feel, before arriving at a conclusive opinion respecting the value of this discovery to the society, experiments with other species of fruit, as peaches, plums, &c., &c., should be made, and opportunity be offered for their examination, after being subjected to the process. With a view to the gratification of the committee in this particular, Mr. Curtis is about commencing, under their inspection, some

experiments with the early and soft fruits, to be continued with other kinds as they come into season.

In addition to the discovery of a mode of preserving fruit, Mr. CURTIS seems also to have succeeded in finding out a process by which such varieties as are difficult to ripen may be brought to perfection—a discovery of almost as much interest to cultivators as that by which the season of all varieties is so greatly prolonged and their safe transmission to distant places secured.

That the discoveries of Mr. CURTIS are important, and that he is justly entitled to an honorary and pecuniary recompense at the hands of the society as well as that a knowledge of the process should be, if possible, procured for the use of its members, your committee entertain no doubt, and they believe that it will be but fulfilling some of the objects for which it was instituted, in testifying by such recompense a proper appreciation of the merits and discoveries of Mr. CURTIS, and in procuring for the public the means of availing itself of the advantages to be derived therefrom.

Under the existing circumstances, however, while they wish now to place on record such evidence of the claims of Mr. CURTIS as is afforded by this expression of their own opinions and statement of facts, your committee are of opinion that the final action of the society, in relation to this matter, should yet be delayed until the result of the experiments referred to are ascertained, and such further information with respect to the expense attending the process and mode of practicing it procured, as will enable them, in view of the beneficial results of which it is capable, the better to recommend, and the society to adopt, such measures in relation to these discoveries as Mr. CURTIS seems to deserve and its own interest to demand. With these views, your committee ask that the whole subject may be left in their hands, and that further time be allowed to them to consider what action it is proper that the society should take in reference thereto.

WAYNE COUNTY.

IT is pretty generally known that Wayne is one of the finest fruit growing counties in this State.—Monroe, we thought, stood No. 1, but we confess, that on the whole, Wayne is quite as good. The present season is a pretty good test. In Monroe, except within seven or eight miles of the shores of Ontario, the fruit crop is inferior—peaches fewer, smaller, and poorer than usual, and apples spotted and scabby, as we have never seen them before.

On the 30th of August we took a drive through a part of Wayne county, as far as Walworth, and were quite surprised to find the peach trees *loaded* —apples bearing a full average crop, though not as *fair* as usual. In the orchard of WM. R. SMITH, of Macedon, we found a very large collection of peaches in full bearing. The *Tillotson* was nearly gone, and the *Early York*, serrate, just in season. Mr. SMITH was not at home, but his lady, who, by the way is well versed in pomological matters, conducted us through the grounds and imparted all the information desired. In passing around, Mrs. S. called our attention to a very striking proof that the peach relishes good treatment, one tree stood close to a compost heap, and two more stood in a hog pen.—These three trees were loaded with vigorous young shoots, large, glossy, deep green foliage, and a fine crop of large ruddy fruit, whilst their neighbors, standing in grass, had feeble shoots, yellowish foliage, and smaller fruit; but similar instructive cases may be found in almost every orchard.

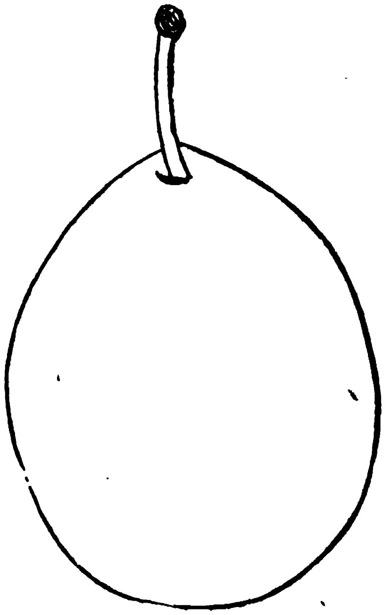
In the adjoining grounds of JOHN J. THOMAS we also found a large collection of peaches, among which we were particularly pleased to meet *Fay's Early Ann*. Mr. THOMAS speaks highly of it. It is twice as large as the old *Early Ann* and ripens about a week later. The tree is a vigorous, good grower, and hence it must prove a valuable sort.—We saw and tasted one or two specimens that remained on the tree, and from them we formed a high opinion of its merits. We saw a few good specimens of the *Tillotson*, but as a general thing they are small and badly affected with *mildew*, both tree and fruit. When perfect, it is a fine flavored, delicious peach, but so few attain perfection that it is questionable whether it be worthy of cultivation, and especially as the *Serrate Early York*, a sterling sort every way, ripens nearly as soon. At any rate it should never be planted for profit.

Having heard much of the extensive orchards and good cultivation of the Messrs. YEOMANS, of Walworth, we took this occasion to pay them a visit, and we were amply compensated by what we saw.—Walworth is a very small but pretty village, situated on a gentle elevation in the midst of one of the finest agricultural districts in the State. The country for a considerable distance around, is level or gently undulating, and the view from the village is both extended and beautiful. The streets in and around the village are well planted with trees, principally sugar maples. They have been well planted and are in a flourishing condition. Ten years hence they will make a little paradise of Walworth, and those who may then be enjoying their shade and shelter will bless Mr. YEOMANS, by whose exertions, principally, this timely planting has been done. We could wish nothing better to every village in the country than one such public spirited and tasteful citizen as Mr. YEOMANS.

Mr. T. S. YEOMANS has a fine young orchard in full bearing. His peach trees, taken altogether, are the finest we have seen this season. The crop is immense. *Early Tillotson* and *Early York* were ripe. The former Mr. Y. considers unworthy of cultivation. The latter with him, as with every body, is *first rate*. He has recently planted an orchard of dwarf pears on quince stock—3000 trees—all *White Doyenne* except about 400 *Duches d'Angouleme*. They are planted at ten feet apart. The space between each row is occupied with two rows of corn, and the spaces between the trees in the row with potatoes, so that besides the trees there is a fair crop of other things. A sufficient space has been kept clear about the trees so that they have made excellent growth. They are four years old and just coming into bearing. The ground on which they stand is a substantial loam, well drained and deeply plowed. In three or four years this orchard will be a beautiful sight, and we predict that it will be a profitable investment.

Mr. YEOMANS is at this moment busy draining another field and he is doing it thoroughly. It is not what could be called *wet* land. It has a fine natural slope and one would suppose at first sight, that draining is unnecessary, but the subsoil is hard and water cannot easily penetrate it, consequently it remains long on the surface, sours the soil, and retards operations in the spring. The drains are made two and a half feet deep, and the drainage material is two inch pipe tile, except in the main drains in which four inch pipe is used. Mr. YEOMANS, if we remember right, informed us that he had spent about $1000 upon draining within a year. His barns, wagons, &c., are all worthy of notice as models in their way, and illustrative of that active, progressive spirit that should in these days animate every man who assumes the avocation of an agriculturist. The system of culture pursued by Mr. YEOMANS cannot fail to double or treble the product of his land in a few years, and he is well aware of this, for if our impressions be correct he is not a man who works at random or invests his capital in a way that will not in the end accrue to his advantage.

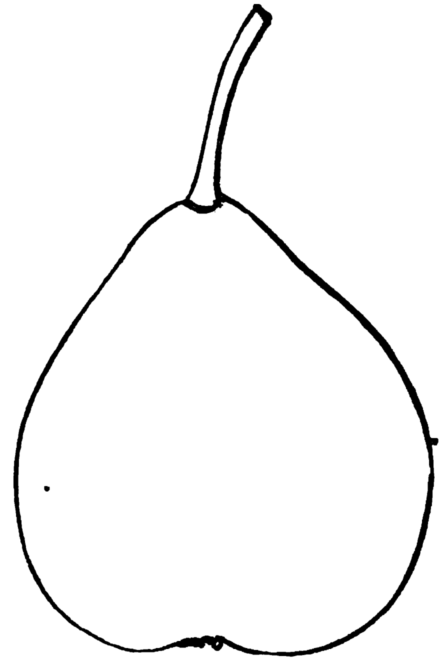
Draining is greatly needed throughout the country. Go where we may this is evident. How common it is to see an acre or two of fine land left to weeds in the very heart of a wheat or corn field because too wet, whilst an outlay of five dollars would make it the best spot in the field.



THE BRADSHAW PLUM

Synonym—*Large Black Imperial.*

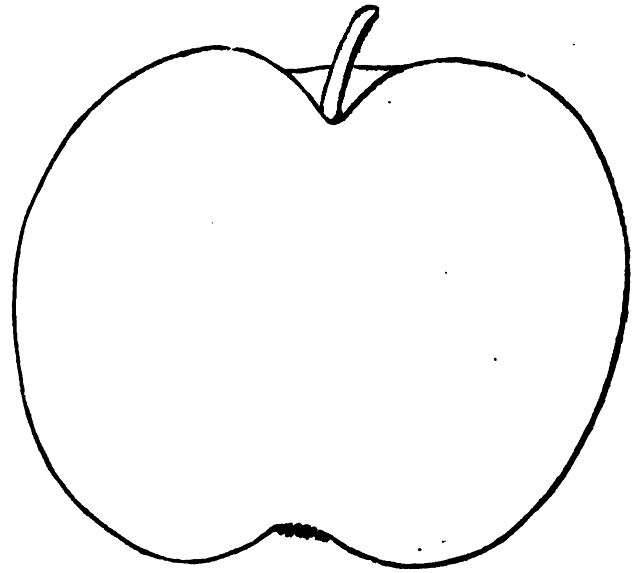
Twelve years ago we received this variety from Mr. Kenrick, of Boston, under the name of "Large Black Imperial," and five or six years ago we received from Messrs. Hovey & Co., of Boston, the "Bradshaw," and they prove synonymous. Two years ago, we received specimens of the same plum from Judge Burroughs, of South Bend, Indiana.—We believe it is an old French variety that has lost its true name. We think that Mr. Hovey described it some years ago, and gave an account of it; but in referring to his Magazine, we are unable to find it. It is on account of its being cultivated and exhibited at Boston, as the *Bradshaw* that we consider it best to adopt that name. It is a large and beautiful plum, and though not of first quality when compared with a Green Gage, it is nevertheless good and deserving of cultivation. At the present moment it is the most admired of any in our collection. Size—very large, nearly equal to the yellow egg. Form—obovate, smallest at the base, with a suture on one side. Color—dark violet red, with a blue bloom. Stalk—half to three-fourths of an inch long. Flesh—yellowish green, when fully ripe erect, adheres to the stone. Tree—vigorous and sweet, one of the finest growers. Young shoots smooth and reddish, buds short and pointed, foliage large, glossy, serrated and waved on the edges.—Ripe middle of August, with Early Orleans one of the earliest very large varieties.



THE BEURRE GIFFART PEAR.

About four years ago this variety was sent us from France as "one of the finest early pears." It has been rather more tardy in fruiting than many others, so that we have not had specimens fit to form judgment upon, till this season. Half a dozen trees have now borne, and we are happy to say that in size, beauty, and quality, it meets our expectations, and we have only been disappointed in its season of ripening. Instead of coming in as we expected, about the last of July, it has not ripened till about the middle of August. This, however, is a late season, full two weeks later than the average, on account of the cold and rainy weather that has prevailed during June and July. It will succeed the Madelaine, which yet stands the *first very good* pear that ripens. Size—medium, rather larger than the Madelaine. Form—turbinate, tapering to a point at base of stem, very regular. Stalk—about an inch long, rather slender and slightly curved, dark olive color. Calyx—open, in a shallow smooth depression. Skin—smooth, pale yellowish green in the shade, sprinkled with small brown dots, dull reddish brown in the sun, sprinkled thick with small crimson dots and indistinctly streaked. Flesh—white, fine grained, very juicy, of a mild refreshing sweet, similar to the Madelaine to which it is probably related. Tree a free grower on both pear and quince, very peculiar in its appearance, and easily distinguished from all others by those who have seen it two or three times. The shoots are long and slender, generally erect, and the bark is of a deep reddish brown, almost mahogany color. The leaves are smooth, flat, and pendulous, having, long slender footstalks and very conspicuous stipules. Season first to middle of August.

The hot sun, during the last week or two, has injured dahlias, and on this account we fear the show at our State Fair will not be as good as it otherwise would have been.



THE HOLLAND PIPPIN APPLE.

Syn.—*Summer Pippin.*

The *true* Holland pippin, that described in Downing's Fruit and Fruit Trees of America, in the London Society's Catalogue, by Lindley and other English writers, is very little known or cultivated in Western New York. In three-fourths of our orchards the Fall Pippin goes under this title, having been so introduced by the earlier nurserymen and orchardists. It is time the error should be corrected. This Holland Pippin is a good apple, but very far from being so valuable as the genuine and unrivalled Fall Pippin. Size—large, nearly as large as the Fall Pippin.—Form—roundish, slightly conical, generally very regular though some specimens have a square outline. Stalk—half to three-fourths of an inch long, and pretty stout and inserted in a deep cavity. Calyx—small, closed in a very shallow and somewhat furrowed basin. Skin—pale green in the shade, becoming yellow as it matures; dull brownish in the sun; usually some russet at the stem. Flesh—yellowish white, juicy, sub-acid, rich, and excellent for cooking. It is remarkable for ripening gradually—for two weeks or more previous to this date (Aug. 29,) it has been dropping from the tree in fine condition for use, while a large portion of the crop remain apparently quite green. In England its season is November to March. The tree is large and spreading, resembling in habit, as well as in wood and foliage, the Fall Pippin. Standard trees, as a general thing, begin to bear the seventh or eighth year.

STRAWBERRIES.

Mr. Pell, proprietor of the celebrated Pelham orchard on the Hudson, seems no less successful in the culture of strawberries than in Newtown Pippins. He has produced, the past season, so the "Horticulturist" is informed by an eye witness, a *Hovey's Seedling* berry weighing two ounces and measuring eight and a half inches in circumference—the largest ever grown in this country, we presume; but still they are trifles to the *British Queens* raised in England, as will be seen from the following extract. It is a fact worthy of putting on record, that, abroad or at home, wherever we have found extraordinary large strawberries we have also seen extraordinary supplies of moisture.

Cultivation of the Strawberry.—Mr. Beach, a market gardener, at Isleworth, having surprised every one this year with his British Queen strawberries, both in Covent-garden, at Chiswick, and the Great Exhibition, they having been not only extremely large, but fine in flavor, I got an introduction to him in London, and he at once asked me to go down with him to Isleworth, and see his place. He is one of those John Bull ready-witted class of men, dark and sun-burnt, somewhere about 55 years of age, and looking altogether as if he had spent a month on the south side of the Rocky Mountains. We took the train at the Waterloo station, and turned off by what is called the loop line, at Mortlake, through a large tract of market gardening ground. Mr. B.'s garden lies near the bottom of a gentle declivity, about a mile from Hounslow; there is a large pond at the east end of his land, with about 20 springs continually flowing into it, and this pond affords the means of irrigating the whole of his ground. His Strawberry land, which consists of about ten acres, forms a parallelogram, whose longest side runs south and north, the south end being about six feet below that on the north, while there is also a declivity from west to east; making it altogether peculiarly suitable for irrigation. When Mr. Beach took this Osier ground, for so it was, about five years ago (and there is part in Willows now), he saw that owing to the springs and the two falls of the ground, as well as the texture of the soil being a sandy, dark, loamy, soapy, vegetable material, that it would answer the purposes to which he has applied it well. He took a lease of it, and the first thing he did was to make a cart-way on the west upper side, throwing up the earth some two feet above the general ground, so that the path where the horse goes is from ten inches to a foot deeper than where the wheels pass along, thus forming water-courses all along. The next thing he did was to form his ground into ridges, about 40 feet wide, running the short way of the square; the centres of these ridges are planted with Pears and Apples, and between with black Currants, all being loaded, especially the black Currants, with crops such as never were seen before. About three feet from the trees on either side, are water-courses leading to the bottom of the ground, where there is a mill stream, and on the two declivities between the rows of trees are his Strawberries, some five or six rows of which are planted along the sides of the two feet broad ditches, between the ridges. These ditches receive the irrigating water, which percolates under the plants down into them. It is unnecessary to describe the size and strength of the plants, as well as the enormous crops they produce. His heaviest Queens weighed 3 ounces: all his plants stand 2 feet apart each way. The laying out of this ground has cost him much, but it will in time well repay all expenses. Mr. B. was also the first to form Violet ridges, with a sharp declivity, upon a light sandy soil. Russian Violets planted on each side of these long ridges, not only come in early, but bear blossoms in abundance. The ridges are nearly as sharp as a mushroom ridge. I advised Mr. B. to try Water-cresses, which he could grow admirably, on account of the continual flow of spring water, which he has at command. James Cuthill.—*Camberwell.*

Wm. R. Prince, Esq., of Flushing, has recently returned home after an absence of about two years in California. He states that he has sent and brought home seeds and bulbs of over two hundred species of trees, shrubs, and plants, "new to the Atlantic States and the rest of the world."

Rice has been cultivated more than 150 years in South Carolina. It was planted there in the year 1693, and has been grown every year since that time.

NOTICES OF NEW WORKS.

THE AMERICAN POMOLOGIST, containing finely colored drawings, accompanied by letter press descriptions of Fruits of American origin. Edited by W. D. Brinkle, A. M., M. D.—Published by A. Hoffy, Philadelphia. To be issued in numbers, not oftener than once in three months, commencing July, 1851. Each number to contain ten illustrations, true to nature. Every four numbers will constitute a volume. $2 per number or $8 per volume.

A good many years ago Mr. Hoffy, the accomplished artist who now undertakes the publication of the "Pomologist," commenced a similar work, under the title of "The Orchardist's Companion." It had artistic merits at least that ought to have secured it success; but it had not the advantage of an able and reliable editorial head as this has, nor did the subject of pomology in those days attract so much attention as at present. Dr. Brinkle, has for many years devoted attention in a particular manner to fruits of American origin. His name is familiar to the readers of horticultural journals, and occupies a prominent place in the transactions of all pomological conventions that have been held. No man is better qualified for such a task as this.

The present number contains the Brandywine, Moyamensing, Petre and Pennsylvania pears, Republican Pippin apple, Eliza peach, Burlington apricot, Wendell's Mottled Biggarreau cherry, Col. Wilder and Cushing raspberry.

The coloring of the *fruit* is well executed in the main, the *wood* and *foliage* not quite so well. The natural color of the bark of a young shoot, the form and color of the bud, are points that to be useful must be exact, and to make them so is a most difficult matter no doubt, by the lithographic process.

* * *

REPORT OF THE AMERICAN POMOLOGICAL CONGRESS' held at Cincinnati, Oct. 2d, 3d, and 4th, 1850. Published by the Ohio State Board of Agriculture.

We are now, by the kindness of some friend, put in possession of this report, nearly a year after the congress was held. Among the proceedings we find reports from S. A. Barker, on the fruits of Morgan county, Ohio; from Maine, by Henry Little; from Vermont, by C. Goodrich; from Kentucky, by Lawrence Young; from Michigan, by W. H. Scott; from Illinois and the West, by Dr. J. A. Kennicot; from Canada, by James Dougall.—There is much valuable information scattered through these reports, and next winter when we have leisure we will endeavor to sift it out. Dr. Kennicot's report, which is about half the pamphlet, is entitled "Random thoughts and observations on pomology and kindred subjects, in Illinois and the West."—We put it aside for a quiet hours reading. The doctor has done more we believe, than any other man to give interest and variety to both the meetings and reports of the pomological congress.

* * *

It unfortunately happened that our State Fair, the Massachusetts and Pennsylvania Horticultural Societies' Fairs, were all held this season in one week and on same days. A great number of persons have been thus prevented from attending but one of them. We think that these great Societies should have some understanding about these things, so that they might, if possible, come off in different weeks. We have no doubt this could be done with advantage to all.

ANSWERS TO CORRESPONDENTS.

A correspondent from Wilson, N. Y., who signs himself "Practical Improvement," wishes to know the best process for making wine for "sacramental purposes"—when to gather the grapes—prepare them for the press — make the wine and bottle for use.—Will some one who has experience on this subject reply?

In regard to strawberries, he says: "I had this year 150 hills from which 72 qts., at 1*s*. 6*d*. per qt., were sold, and 24 qts. given away and eaten—making three bushels, besides what were picked from the vines by children, &c., without being measured."

Mr. Editor:—There is a new kind of fly that has lately made its appearance in these parts. Some are alarmed about it, fearing it might damage the wheat crop. We want you to tell what it is, if you can, by the description below. It is about half an inch in length, a yellow body with a redish furz, and is an inhabitant of the dung hill D. D.—*Reading Centre, N. Y.*, 1851.

Cannot tell from this description. Is it winged or not? Send specimens.

Mr. Editor.—The rose bushes in all this region have been very much injured by a small green worm. In three days after they were first discovered, some of our bushes looked as if they had been thoroughly scalded. They fasten themselves on the under side of the leaf, and eat it to a perfect web. If you can tell us how to prevent or stop their ravages, you will confer a great favor on many subscribers to your interesting and valuable paper. E. O. Ward.—*Dundaff, Pa., Aug.*, 1851.

It is a caterpillar and must be shaken off the bushes and destroyed, in the same manner as the gooseberry caterpillar.

Mr. Editor:—Can you inform me through the Farmer of the mode of cultivating the Berberry for a hedge. I see it recommended in Cole's Fruit Book. I wish to know where the seed can be obtained, and the time and manner of putting it in wet land, as I am intending to emigrate to the west, and oblige a subscriber. Samuel Ewing.—*Industry, Pa., Aug.*, 1851.

The Berberry may be propagated either from seeds or suckers. Seeds may be obtained at most of the seed stores, especially the eastern ones. They should be kept in sand all winter, and sown in the spring as soon as the ground is dry.

Mr. Editor:—I wish to make some inquiry of you or some of your numerous correspondents, in reference to the best time of sowing the seed of the Mountain Ash, and the best way to cultivate it: and, also, whether the seed comes up the first year or the second spring, as I sowed a quantity of the seed last fall and got but one or two plants from it, and I wish to sow a quantity this fall. Thomas Thomas.—*Northville, Mich.*, 1851.

The seed will not grow the first year. After washing it out mix it with sandy earth and lay it in a heap in the ground covered three or four inches deep. Leave it there for one year and then sow.

Mr. Editor:—I notice in the May number of the "Western Horticultural Review" an extract from a letter to the editor from you, in which you say, "the *White Bellflower* is sound and fresh yet, and of a beautiful lemon yellow, or straw color, and a specimen cut, proves to be one of the highest flavored fruits of the season." Say, now Mr. Barry, is it as high flavored as the *Baldwin*, *Swaar*, and others of the same class? Or, *can it begin* with the *Esopus Spitzenburg* or *Northern Spy?* It would seem to us "outsiders" of the west that your gustatories must serve you rather poorly if you put the first named fruit in a class for high flavor with the last. Please explain! W.—*Millersburg, Mercer Co., Ill., Aug.*, 1851.

The specimens referred to were grown in the west, and were, in our judgment, just as we stated.—Grown here, we do not think it would be so.

Youths' Department.

SION HOUSE, THE RESIDENCE OF THE DUKE OF NORTHUMBERLAND.

In a previous number of the Farmer we intimated that we might see some things in our travels in Europe, interesting to the youth, which we should give in our Youth's Department. We take the following sketch from our memorandum book, and we shall select others for future numbers :

This 14th of June, the finest day I have yet seen in England, I have spent in visiting this ancient and magnificent place. The Duke has liberally thrown it all open to visitors during the exhibition, and it is one of the chief places of attraction. It is situated about an hour's drive from London on the north bank of the Thames. The house was originally built in 1605, and about a century ago was rebuilt as it now stands. It is a noble structure. In its architecture, galleries of works of art, conservatories, gardens, parks, and splendid full grown trees, is one of the most interesting of the numerous princely establishments in the suburbs of the great city. The day I have spent in it I can heartily note down as the most agreeable I have yet experienced on this side the water. I have been able to meet face to face with noble trees that years ago I had cultivated a slight acquaintance with through Loudon's Arboretum.

A row of the finest old horse chestnut trees I have ever seen gave me warning of my approach to the entrance. Their flowers had not wholly disappeared, but what a gorgeous spectacle they must have been when in full bloom. You can imagine a row a quarter of a mile long of these gigantic trees with heads full sixty feet in diameter, covered with their showy blossoms. I was fully satisfied with this sight alone as a compensation for my journey, and entered the gate with expectation at its highest pitch. The carriage way is as smooth as marble, and extends as far as the eye can reach in easy, graceful turns, through a magnificent park clothed in spring verdure, studded with magnificent trees, with here and there a group of fine cattle enjoying their shade.

Here is a group of fine old elms in all the majesty of a luxuriant natural growth—the hand of man has never dared to mutilate a branch. Close to them stands a horse chestnut some forty feet high and not less than sixty feet in diameter of head, and it is almost in perfection of bloom. A few rods from it stands a yellow flowering one nearly as large. Next we come to a group of four elms, none of them less than six feet in diameter of trunk. Then a group of three yellow flowering horse chestnuts all grown together, the lower branches almost touch the ground, and the whole forms a magnificent pyramid in full bloom, some fifty feet high and not less than one hundred in diameter. Close to this group stands another of young scarlet horse chestnuts in full bloom. This blossoms later than the others, and is just in perfection as the others are fading. Further on we come to an old chestnut that stands on one side of the carriage way and spreads its branches fairly over it, making a complete arch, and when we pass it we come to a broad, lazy looking stream, filled with water lilies in bloom — its whole surface is covered, a single spot only here and there showing that the water moves. A beautiful bridge carries us over it, and now we look down a quarter of a mile of a charming avenue of lindens, on *Sion House*. What a grand picture, or rather what a grand, real scene it is !

SION HOUSE, THE RESIDENCE OF THE DUKE OF NORTHUMBERLAND.

When I arrived at the court gate, the keeper, a fine aristocratic-looking specimen of the Englishman, in a superb livery, directed me to the cottage of the gardener, Mr. Iveson, who very kindly accompanied me through the conservatory, peach and grape houses, kitchen and flower garden, and all the more interesting points. The conservatory is a noble structure fifty feet high, and filled with the rarest plants ; the roof inside was covered with passion flower in bloom. At one time it was the finest in England, or in the world, and cost, I believe, about £40,000. Mr. Iveson is a very intelligent and capable man, and manages his great charge in a most creditable manner. The graperies and peach houses are extensive, but not in prime order, as the gardener informs me that retrenchment of expenses has for some time been the order of the day. In front of the conservatory is a beautiful *rose garden*, of a circular form, mainly filled with fine specimens of standard or *tree* roses. From the gardens we entered the arboretum. Here we find some magnificent cedars of Lebanon, two hundred years old. There is an old black mulberry tree, the exact age of which nobody knows ; it is propped up all around and protected with an iron railing.—It is a precious relict of past ages—said to have been planted in 1548, when the first mulberry trees were brought to England. I recognized it at once, from the figure and description in Loudon's Arboretum. Next we come to a majestic *Sophora*, also figured in Loudon ; *weeping ash*, an immense one, with its drooping branches crossed and twisted in a most extraordinary and picturesque manner; purple beeches ; tulip trees ; cypresses ; &c., &c., of immense size. As we pass around among this labyrinth of trees, we come upon a beautiful circular flower garden—a vase in the centre, and the flowers in circular beds four or five feet wide, separated by grass walks ; the whole enclosed by a sweet briar hedge, in which a few standard double yellow roses are introduced. From this we take another direction among more full grown trees, and presently we come upon the "American Garden," a splendid collection of *Rhododendrons* and *Azaleas* in full bloom. In the neighborhood of this are fine specimens of the new and rare evergreens—two cryptomeria, (the Japan cedar,) 10 feet high and perfect in form ; two Juniperus recurva, six feet high ; two Cupressus torulosa, six feet high ; &c., &c. Within sight of this spot are a magnificent beech *(Fagus sylvatica pendula,)* with its boughs sweeping on the lawn, a group of four beautiful cembran pine, about thirty feet high, pretty, upright, stiff, conical trees. But I find that I cannot mention a tenth part of the fine objects I noted down. After being completely wearied out in the ground, I returned to London, promising myself another day among the works of *art* in the house.

ANSWERS TO ENIGMA, &c., IN AUGUST NUMBER.

Answer to Arithmetical Question.—1st crib contains 300 bushels ; 2d, 575 ; 3d, 675 ; 4th, 375 ; 5th, 75.

Answer to Enigma—The Genesee Farmer. Tennessee, Heart, Green, Fame, Man, Ear.

Ladies' Department.

Messrs. Editors :—As you express a desire to hear from your readers of their success with their seeds, I write to thank you for those you sent me ; but they arrived so late, I am afraid the phlox, lupin, jacobea, bartonea aurea, nemophila, and ten week stocks, will not blossom. The petunias, portulacca, balsams, and others, are fine. I have taken great care of them, as I have time and admire the petunias. I would like to propagate them by cuttings if you could give me some instructions. I have heard of the verbenas being very handsome. If you could send me a few seeds of them, and any others you have to spare, I will be thankful and will take great care of them. Roots that keep in the ground through the winter thrive best, as our springs are generally dry and cold. In the July number of the Farmer, I saw an illustration of the holly-leaved berberry; if you would not think me intruding, I would ask you for a few seeds if you have them to spare. My garden is admired by spectators. I am saving seeds for my neighbors, as they are very desirous to have them. Caroline Perrine.—*Hermaan, Aug.*, 1851.

Petunias are easily propagated by making cuttings about six inches long, and rooting them in pots. This should be done soon, so that they may root before winter. Treat them as you do house plants. If you have a choice plant which you would like to preserve, place it in a pot now, and it will continue to blossom.

* * *

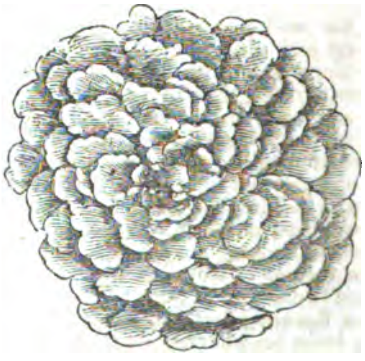
Messrs. Editors :—I being one of the many who received of your bounty last spring, feel it no less a privilege than a duty to express my thanks, and inform you how I am succeeding in the cultivation of flowers. I planted the seeds that you sent me, most of which came up, and though the season has been very dry, with good attention they have grown finely. My garden presents a fine appearance. I have several fine varieties of portulaccas, petunias, and sweet peas, also balsams, phloxes, astars, lupins, and a variety of other annuals, which are now in bloom, and amply rewarding me with their rich blossoms, for the little trouble I have taken in rearing them. I shall preserve all the seeds, and as you suggested in a former number of the Farmer, distribute them among such of my neighbors as have none. I am glad to see such an interest manifested in the cultivation of flowers as there appears to be from the account you give of the number of applications you have had for seeds, and if all have been as successful in growing them as I have, they will have seeds enough to supply many who have not so choice a variety. I noticed in the last number of the Farmer, that you intend supplying applicants with seeds of California annuals. I should be pleased to have you send me some, and can assure you they will be thankfully received by one who is a great admirer of those beautiful productions of nature, flowers. C. S. H.—*Plattekill, N. Y., Aug.*, 1851.

To C. S. H. and others we shall send more seed before spring.

* * *

Messrs. Editors :—We had supposed that of the five hundred ladies who applied for flower seeds last spring, many with less cares, and a greater tact at wielding the pen than ourselves, had long since reported progress : but we find others may have come to the same conclusions, and hence the silence upon the subject. We received our package of seed in good order and due time, and soon consigned them to a fine fertile spot. Of the ten kinds we received eight soon made their appearance. These are tended with all necessary care, and I had the pleasure of seeing them flourish finely, although we must acknowledge we were somewhat disappointed at seeing in the place of "Fine Paris Balsams," what we had long cultivated under the unpretending title of Lady Slippers, and half suspected it a hoax of a *certain personage* printers are said to keep about them. But "the rose by any other name would smell as sweet," and Lady Slippers or Paris Balsams, as you please, are pretty flowers, and well worth the attention of any lover of beauty. We have them now in all their perfection, scarlet, crimson, purple, pink, and white, the finest assortment that can be produced, some three feet high, with branches large enough for the fowls of heaven to lodge therein, and perfectly filled with blossoms. We have, too, Sweet Mignonette, German Asters, Sweet Peas, Marigolds, Poppies, an elegant assortment, and two other kinds the names of which we cannot give as our labels were destroyed by the rains. We are in the practice, when we have one flower that surpasses another of its kind in beauty, of tying a cord around the stem that we may make sure of the seed. We have several poppies marked in this way. I hope (if Jack Frost with his sharp fingers will keep at a distance a few days,) to save a good quantity of these and other seeds, with which to supply our friends. Please consider me an applicant for a package of your Californian productions, and very much oblige C. J. Fursman.—*South Royalton. N. Y.*

We have received many letters from our lady readers, giving us an account of their success in cultivating flowers from seed distributed by us. We are gratified that so many have been successful. We shall continue our efforts to increase the love of flowers among our readers, and shall improve every opportunity to supply seeds to those who may desire them. Our object in furnishing flower seeds is not to introduce new varieties, or old varieties with new names, but to encourage the cultivation of the better kinds. The lady-slipper, as it is sometimes called in this country, is known by the name of balsam both in this country and in England, and is generally cultivated ; yet, few who cultivate them know anything of a good balsam—as double as a rose and almost as beautiful.



We give here a specimen of a fair one, though far from being perfect. This was raised from seed similar to that furnished to our subscribers.

Editor's Table.

New York State Fair.—*Floral Hall*, an immense oblong canvass tent, 140 feet by 80, was devoted exclusively to the exhibition of fruits and flowers. The interior was arranged somewhat in this way:—Around the outside was a low staging composed of three shelves about a foot wide, rising one above the other, and covered with cloth: this was wholly occupied with fruits. Within this staging a broad and beautiful gravel walk extended around the whole tent, from which every object could be satisfactorily seen. On each side of this walk was a rustic railing or barrier, made of larch poles and grape vine stems tastefully interwoven. These were intended to prevent visitors from handling the objects on the tables. Within the walk was a continuous range of tables around the tent, appropriated to cut flowers and ornaments. In the very center stood an oak tree, its numerous branches covered with ivy and other climbing plants, rustic baskets of fruits and flowers suspended from them, and an eagle and numerous humbler birds perched upon them as natural as life. At the base was a very pretty piece of rock work, embellished with appropriate plants. The space on either side of this tree was occupied with a staging for the pot plants, and a couple of rustic seats for committees or visitors whom the superintendent permitted to enter. On one side was a double door—visitors entering at one side and passing out through the other. Between the tables and the barriers a space of two feet was left, which exhibitors were permitted to occupy in order to answer questions and give explanations to visitors.

This is a picture of Floral Hall as faithful as we can portray it in words; but those who have not seen it can form but a meagre idea of its tasteful and brilliant appearance. They may imagine the staging extending around the whole tent, covered with dishes and baskets, and interspersed with trees and branches of trees laden with the finest fruits—apples, pears, peaches, plums, grapes, &c., in such variety and of such a quality as have rarely been equalled at any exhibition in the world—the contributions of about fifty cultivators from different parts of the country. On the other hand, the range of tables laden with cut flowers, dahlias by the thousand, and roses, phloxes, verbenas, petunias, &c., exhibited singly in small vials, besides floral temples, baskets, and other devices, lighting up the interior of the tent into a perfect blaze. Then to crown all, the "brave old oak" in the center, with its rocky base, its rugged powerful arms stretched out and bearing rich baskets of fruits and flowers, vines clambering over them and clinging to them, and birds and squirrels perched upon them apparently in all their woodland happiness.

The whole arrangement was excellent as well as beautiful, and elicited admiration from the thousands and tens of thousands who paid it their respects during the three memorable days. The tree in the center was a novelty—a happy idea well carried out. On all sides we heard the remark pass from mouth to mouth, "It is finer than ever before"—a proof that nature has for most people a greater charm than art. Heretofore the central ornament of Floral Hall has generally been a highly decorated temple, very tastefully and well executed, and always much admired; but it was costly, and it had grown stale, as everything does when too frequently repeated. The change, we are happy to say, gave great satisfaction, and will, we hope, suggest hereafter something new and still better.

The Hon. L. A. Ward, President of our Horticultural Society, performed the laborious duty of superintendent of the Hall, and never have we seen duties attended to with greater devotion or more complete efficiency. From the opening to the close he occupied his place in the center of the Hall, and we feel, as others do, that much of the quiet and good order that prevailed, was due to his prudent management.

The committee who devised and directed the arrangement of the Hall, deserves credit for the able and faithful discharge of its duties. It was composed of Messrs. Geo. Ellwanger, C. J. Ryan, H. E. Hooker, J. M. Whitney, Rob't Donnelan, and Joseph Frost. All the rustic work was devised and executed by Mr. Adam Kuchler, and it reflects much credit on his taste and ingenuity. He is an artist in these matters. Mr. Wm. Webster also rendered valuable services in perfecting the arrangements. We ought not to forget a committee of young ladies, selected by Mr. Whitney, who assisted the general committee by their taste and handiwork, and above all by their presence. We have not space at this time to enter upon any detail of the exhibition, but will take it up next month.

In our next number we shall give a view of the interior of Floral Hall.

The success of the State Fair in this city, and the satisfaction enjoyed by distinguished gentlemen from other states and countries attending the same, are largely ascribed to the urbanity and labors of the President of the Society, John Delafield, Esq.

An Agricultural Congress.—We have to thank the Hon. Marshall P. Wilder for an invitation to attend the Exhibition and Dinner of the Norfolk Agricultural Society, Mass. We can not refrain from copying some remarks contained in Mr. W.'s letter—leaving out the complimentary remarks in relation to our personal labors for the advancement of agricultural knowledge, which our modesty induces us to believe rather undeserved, notwithstanding the opinion of so wise and worthy a man as Mr. Wilder to the contrary:

"*My Dear Sir*—I have this moment received the Genesee Farmer for September. I am most happy to know that you approve of our efforts in Massachusetts to advance the cause of agricultural education. * * * * * * No one has a warmer heart or more willing hand to aid you according to my ability. I can sympathize with you in all the trials and disappointments to which we are constantly subjected; but no chagrin or mortification at failures shall ever drive me from the path of duty, and which in this matter I consider next to religious obligations. A brighter day is dawning on us, and if *we* do not see its meridian light in our day, our children or our children's children will. In truth, I believe posterity will reward those who have labored so zealously to advance the art of agriculture, and that your name with many others will be embalmed in the hearts of those who shall in coming time reap the fruits of your labor.

"The great barrier to our success is political juggling for office and its emoluments; but I trust the time will soon come when our legislative bodies, both in State and Nation, shall be fully interested by the farming interest. I rejoice that suggestions have been made by yourself and others, for a National Congress of Agriculture. *I am ready for it. Let me help.*"

The editor of the Maine Farmer, in speaking of our proposition to establish an Agricultural Congress, to be composed of delegates from State and County Societies, makes the following remarks:

"We think well of this plan. The only obstacle to its success is the lack of funds at the disposal of many societies, to carry the proposition into effect. It is a shame and a disgrace to the United States Government that they have done so little to really promote the good of agricultural science or its practice. Every other branch of industry has received its fostering care, but this has been neglected and pushed aside."

Advertisements, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance*.

SYRACUSE NURSERIES.

THORP, SMITH. HANCHETT & CO., PROPRIETORS.

SYRACUSE, N. Y.,

HAVING 100 acres closely planted to Fruit and Ornamental Trees. Roses Shrubbery. Green House plants. &c., we shall have for sale the coming season, a most extentive stock of Nursery commodities, not to be excelled in size and beauty by those of any establishment in the Union. Nurseryman, Amateurs. Orchardists and Venders, are earnestly invited to call. examine and judge.—Our stock of

STANDARD FRUIT TREES

Comprises all of the best varieties of Apple. Pear, Plum, Cherry, Peach, &c.. of such size and quality as no contrast can disparage. We have also. both by importation and of our own cultivation,

PYRAMIDAL. OR DWARF TREES,

Of the Apple. Pear, and Cherry. designed for compact planting. being thereby *especially* desirable for small lots. gardens. &c.. as well as *generally* so. by reason of their habit of early bearing.—We have all of the approved varieties cultivated in this form. from one to four years old—many of the Apples and Pears being now in bearing.

OF THE SMALLER FRUITS,

Currants. Gooseberries, Raspberries. and Strawberries, we are always fully supplied with all the best old and new sorts.

OF ORNAMENTAL TREES,

For the street border. and lawns, our stock is very large. Our Horse Chestnuts and Mountain Ash are particularly noticeable for their luxuriant growth and surpassing symmetry of form.—They uniformly excite admiration.

Evergreen trees in great variety. new and rare. including Lebanon and Deodar Cedars, 4 to 6 feet high ; Japan Cedars ; Spruces ; Junipers ; Taxodiums. &c.

Pæonies—A splendid collection of both *tree* and *herbaceous* varieties.

Dahlias—One hundred and fifty selected sorts, comprizing the finest English prize flowers, with all the best in the United States —25 to 50 cents each for whole roots.

Phloxes—Over fifty of the choicest kinds.

Roses—A most extensive assorment, comprising 6000 plants of the best varieties. and all the new acquisitions ; amongst them the new Perpetual Stripped Moss, Herman Kegel, the Hybrid Perpetual. Caroline de Sausel, Gen. Cavignac. Gen. Changanier, &c.

Bulbous Roots—A choice collection daily expected from Holland. consisting of Double Tulips, Hyacinths, Crocuses. &c

Plants for bedding out of every description ; Vines, Climbers, &c. Cherry. Apple. and Pear Seedlings.

Buckthorn. 2 and 3 years old—very strong plants.

All of which will be sold as low as at any other establishment, and in many cases lower, either at wholesale or retail.

We are now issuing a new edition of our Catalogue, containing full information of our productions, terms. prices. &c., embracing, 1st. a general descriptive catalogue ; 2d, a full catalogue of select Green House Plants ; and 3d. a special catalogue of Dahlias, Phloxes. and bedding out plants ; which will be sent gratis to all post-paying applicants.

THORP, SMITH, HANCHETT & CO.

Syracuse, N. Y., Oct., 1851.

T. C. MAXWELL & CO.,

AT THE OLD CASTLE NURSERIES. GENEVA, N. Y.:

WITH pleasure invite the attention of patrons. and the public in general. to their extensive collection of FRUIT and ORNAMENTAL TREES. &c., which they offer for sale the coming autumn and spring, comprising *Standards* and *Dwarfs* in varieties desirable for their merits rather than for their novelty, which have been carefully cultivated and are warranted correctly named. Kinds as follows :

50.000 Apple. most choice sorts—very thrifty
25,000 Cherry, one and two years from bud—large growth.
10,000 Pear, standard and dwarfs. on French Quince—best kinds.
5,000 Peach, one and two years old—fine trees.
1.000 Plum—healthy and good.
5.000 Grape, one to four years old, mostly Isabella.
10.000 Evergreens—mostly Balsam Fir.
2.000 Mountain Ash, extra large, with fine heads.
2,000 Horse Chestnut, five to nine feet high—thrifty and strong.
25.000 Buckthorn. three years old—best hedge plant.

Also the smaller fruits. Hybrid Perpetual, and Climbing Roses, Shrubs. &c. &c.

Those who favor us with a call will be treated with on liberal terms. Orders by mail. or otherwise, promptly attended to.

Geneva, N. Y., Oct 1. 1851. [10-1t*]

To Nurserymen and the Public generally.

A. FROST & CO , proprietors of the Genesee Valley Nurseries. Rochester. N. Y., wish to direct the notice of persons intending to plant, to their fine stock of Fruit Trees, Fruit Tree stocks. Evergreen. and Ornamental Trees. which they are offering at greatly reduced prices. by the quantity. and will be happy to forward Catalogues of the same upon *post-paid* application.

Rochester. Oct. 1, 1851

A. LONGETT,

COMMISSION MERCHANT, Office at the State Agricultural Warehouse. No. 25 Cliff street, New York.

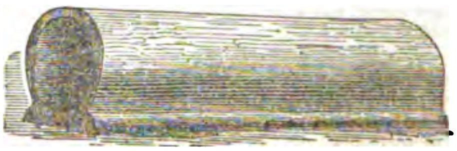
☞ THE WORKING FARMER, a monthly publication devoted to Agriculture. &c , &c.. edited by Prof. J. J. Mapes, and published by A. Longett, 25 Cliff street, New York. [7-4t]

Drain Tile Works.

60 LANCASTER STREET—WEST OF MEDICAL COLLEGE, ALBANY.

HORSE SHOE TILE.

SOLE TILE.



THE subscribers are manufacturing Drain Tile of various sizes to correspond with the above shapes. at prices from $14 to $20 per 1000 pieces, in length they are 14 inches. 1000 of them will lay 1,200 feet of drain, and so shaped as to admit the waters at every joint effectually, draining from land 12 to 20 feet each side of the drain, being the only true. cheap and durable way of draining lands. We have on hand Tile sufficiently large and well calculated for cellar. cistern, sink and yard drains. from 2 to 25 cents per foot. Orders from a distance will receive attention.

October, 1851. [10-1t*] A. S. BABCOCK & CO.

INTERNATIONAL MAGAZINE.

THE STATE FAIR.

NOTICES OF THE INTERNATIONAL.

" The best readable periodical of the day."—*New Orleans Picayune.*

" A work which puts all butterfly monthly magazines in the shade "—*Boston Courier.*

" This work is undoubtedly the best monthly published in the United States. It is cheap almost without parallel. It is edited with marked ability and diligence. No family should be without such a work. and we candidly think this the best of its class."—*Southern Standard.*

" This work takes precedence of all others of its kind. both in quality and quantity of its matter, and indeed may be considered as the very gem of all the popular monthly publications."—*Cambridge Chronicle.*

" It stands at the head of the three dollar monthlies."—*Buffalo Com. Advertiser.*

The proprietors of the *International Magazine* have made arrangements to publish in the November number an account of the STATE FAIR at Rochester, and their carefully prepared notices of the products exhibited. and the lists of awards. &c., will be illustrated by ENGRAVINGS in the highest style of art. from ORIGINAL DRAWINGS made on the spot by Mr. Henry Beckwith, one of the most celebrated animal painters in the world. and by other artists in the departments of Machinery. &c. Disregarding trouble and expense, and intent only on offering the public the best single number of a Magazine ever printed in America. the publishers anticipate the hearty support of the farming and industrial interest throughout the country.

Price of the *International Magazine* :—By the year. $3 ; by the single number. 25 cents. The new year commenced with the August number. Published by

STRINGER & TOWNSEND. 222 Broadway. New York.
D. M. DEWEY, Arcade Hall, agent for Rochester

Virginia Farm for Sale.

THE subscriber offers for sale a very desirale farm in Powhatan Co., Va.. known as *Farmington.* containing 700 acres—250 acres of which. are heavily timbered with oak. hickory, black walnut, &c., and 80 acres of very superior creek bottom. The farm is in a good state of cultivation, is well adapted to wheat. tobacco, corn, oats, &c. The buildings consist of a good dwelling house with nine rooms, kitchen. smoke house. dairy, ice house. servant's house and other necessary out buildings—a large barn, with stationary Horse Power and Threshing Machine attached — a large corn house, stables, six large tobacco houses and an overseer's house

Farmington is situated 25 miles from Richmond, and 2 miles from the James River, in an excellent neighborhood. convenient to mills. schools and churches, and one of the most healthy situations in the State.

This tract is admirably situated to divide into three farms, giving about an equal portion of creek bottom and timbered land.

Possession will be given the 1st of January next, and the privelege of sowing a crop of wheat this fall.

Terms—$10 per acre—$2500 cash, and the balance in three equal annual payments with interest.

Persons wishing a more particular description can address the subscriber at Sablett's Tavern, Powhatan County. Virginia.

October, 1851. [10-2t.] JOHN M. SLY.

FISHKILL LANDING NURSERIES.

2½ MILES NORTH FROM THE NEWBURGH FERRY.

Fruit and Ornamental Trees.

THE subscriber respectfully solicits the attention of FRUIT GROWERS, and dealers in Fruit Trees, to his large stock offered for sale the present fall, consisting of

40,000 APPLE TREES, of the most approved varieties, 6 to 10 feet high, at from $12 to $14 per hundred.

20,000 PEAR TREES, embracing over one hundred of the best varieties, 5 to 8 feet high, 30 cents each, $28 per hundred.

30,000 CHERRY TREES, two to three years from the inoculation, 6 to 12 feet, at $20 to $25 per hundred.

10,000 APRICOT, of the best varieties, (2000 of which are the "Early Golden" a very hardy and productive sort) one to three years from bud, $8 to $12 on Peach, and $25 to $30 on Plum stocks, per hundred.

50,000 PEACH TREES, of the most valuable standard varieties entirely free from disease, one to two years from the inoculation, 7 cents each, $6 per hundred.

10,000 ISABELLA AND CATAWBA GRAPE VINES, two to four years old, with fine roots, having been annually cut back; they are in excellent condition for vineyard planting—20 cents each, $10 to $15 per hundred.

1,000 QUINCE TREES, mostly of the apple variety. Currant and Raspberry bushes, Strawberry plants, Summer Hybrid perpetual, and other roses, &c. &c.

40,000 DECIDUOUS AND EVERGREEN Ornamental Trees, many of which are of large size and fine form. 10,000 Arbor Vita, 1½ to 5 feet high, $12 to $25 per hundred.

8,000 BALSAM FIR, 1½ to 5 feet, $12 to $30 per hundred.

The subscriber in consequence of the advantages he possesses, is enabled to sell at low prices; having 300 acres of land, with a variety of soil, the different kinds of plants are cultivated in that best suited to their growth. His facilities for forwarding packages are all that he can desire. The Nursery is within two and a half miles of the Hudson River Railroad Depot, at Fishkill Landing. Steamboats run daily to New York and Albany from Newburgh on the opposite side of the river.

From 50 to 60 acres attached to the Nursery are closely set with Standard and Specimen trees, which greatly increase his facilities for the attainment of correctness. The new and most valuable varieties of the Apple, Peach, Pear, Plum, Apricot, Cherry, &c., which have recently originated in this country and Europe, have been procured as early as practicable, and tested, or are in the course of being tested, in the proprietor's own grounds. The new and rare Deciduous and Evergreen Ornamental Trees are annually imported, of which fine plants can be furnished.

Those who are planting Orchards, starting Nurseries, or engaged in the sale of trees, &c., are invited to examine his stock.

Trees, Shrubs, &c., when ordered, will be taken up carefully, correctly labelled, packed in the best manner, forwarded agreeable to order, and with the least possible delay.

☞ Catalogues sent to all who apply by post-paid letters.

DANIEL BRINCKERHOOF.

Fishkill Landing, Oct., 1851. [10-1t*]

Buffalo Nursery and Horticultural Garden.

THE proprietor of this old established nursery would call the attention of fruit-growers, nurserymen, and others, to the very large stock of Fruit and Ornamental Trees, Flowering Shrubs, &c., now offered for sale.

The stock of apple trees is unusually large and fine, comprising the most choice and valuable sorts; by the thousand at very low prices.

Pear trees, both standards and dwarfs, of the very best sorts for garden and orchard culture

Cherry trees—a very large stock of fine trees mostly trained with low heads. The most choice sorts are propagated largely.

Also a very good assortment of the plum, peach, apricot, nectarine, quince, gooseberry, raspberry, strawberry, currant, &c., &c.

The assortment of Ornamental Trees, Flowering Shrubs, &c., comprises almost every desirable article.

Also, a large stock of Evergreen Trees by the hundred.

Roses, Dahlias, bulbs, &c., &c.

Stocks of all sorts for nurserys. Large importations are made from year to year.

All orders and letters of inquiry will receive prompt attention. Trees securely packed, carefully labelled, and forwarded with dispatch.

B. HODGE.

Buffalo, N. Y., Sept., 1851. [9-2t*]

Extensive Sale of Real Estate in Virginia.

ON the 10th day of November, 1851, will be sold to the highest bidder, in Williamsburg, 2 787 acres of land belonging to the estate of the late John M. Maupin, lying between said City and Jamestown, 350 acres of which are highly improved; also, about 100 acres of richest meadow. The other portion is abundantly studded with valuable oak and pine timber, easily accessible by water; a part of which lies on a navigable creek, where is located the brick work of a once valuable manufacturing water mill, to which vessels may float, and which creek empties into James river, one mile distant therefrom. These lands will be sold in tracts to suit purchasers: also, other real estate will then and there be sold embracing most desirable houses and lots in said city, including a new and commodious brick store house and lot. See Card published. Also address R. H. ARMISTEAD,

Williamsburg, July, 1851. [8-3t] Exor. & Comr.

HIGHLAND NURSERIES, NEWBURGH, N. Y

A. SAUL & CO. have the pleasure to announce to their patrons and the public in general, that their stock of *Fruit and Ornamental Trees*, which they offer for sale the coming autumn, is of the very best quality and embraces everything in their line that can be procured in the trade.

Dealers and Planters of Trees on a large scale, will be treated with on as liberal terms as can be done by any establishment of *reputation* in the country. They flatter themselves that for correctness of nomenclature of fruits (which is a serious consideration to planters) that their stock is as nearly perfect as it possibly can be, having been all propagated on their own grounds, from undoubted sources, under the personal supervision of Mr. Saul.—They have propagated in large quantities all the leading standard varieties, which are proved to be best adapted for general cultivation, especially those recommended by the American Pomological Congress at its several sessions, as well as all novelties of recent introduction, and kinds, particularly suited to certain localities, and sections of the Union and Canadas.

Their stock of Pear Trees is the largest they have ever had to offer for sale, and among the largest in the country, and consists of over 50,000 saleable trees.

The stock of Apple Trees is also very large, as well as Plums Cherries, Apricots, Peaches, Quinces, and Nectarines. Also, Grape Vines, Gooseberries, Currants, Raspberries, Strawberries, &c. &c. &c.

Pears on Quince, Cherry on Mahaleb, and Apple on Paradise stocks, for pyramids and dwarfs for garden culture, and of which there is a choice assortment of the kinds that succeed best on those stocks.

DECIDUOUS AND EVERGREEN ORNAMENTAL TREES AND SHRUBS.

Embracing all the known kinds suitable for street planting, of *extra size*; also, the more rare and select, as well as all the well known kinds suitable for Arboretums, Lawn and Door-Yard planting, &c., including Weeping Trees, Vines, Garden and Climbing Roses in great variety. Hybrid Perpetuals, Hybrid China, Hybrid Bourbons, Hybrid Damasks, Hybrid Provence, and Bourbon, Tea, China, and Noisette, and Prairie, and other Climbing Roses.

A large quantity of Arbor Vitæ for Screens, Buckthorn, Osage, Orange, and other hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere. For further particulars see catalogues, a new edition of which is just issued, and will be forwarded to all *post-paid* applicants by mail. A liberal discount will be made to purchasers who buy to sell again, and extensive planters on their own account.

P. S.—Freight paid to New York.

Newburgh, Sept. 1, 1851. [9-2t]

Lands of Long Island,

ADJOINING the villages of Lakeland and Hermanville, about 48 miles from the cities of New York and Brooklyn, by the Long Island Railroad. The opportunity is now offered to all those who ever wish to obtain land on Long Island, the Ancient "Garden of America," that will probably never occur again, for these lands are the only remaining new lands on the Island, and are equal in quality, when cultivated, to any other land.

The results of cultivation on these Island lands have been so great, so much beyond the expectations of any one, that they are now considered of great value for farms and gardens, and will, in all probability, be all taken up for settlement and occupation, or be held at more than five times their present price. All kinds of produce may now be seen growing there, such as wheat, rye, corn, potatoes, and garden vegetables, with fruits and flowers, in the most luxurious growth, where but a short time since the land was covered with trees and bushes.

The surface of the ground is perfectly beautiful, free from stone or bogs or marshes, and the climate as healthy as can be found in this latitude. The soil is a fine loam, admirably adapted to high cultivation and great crops, and of easy tillage.

Indeed, no New England or Northern New York man can form any adequate idea of the great difference in the labor and strength requisite to cultivate these Island lands, and that required to subdue their own rugged lands, until he has seen or made the trial; and I now offer for sale as handsome land, and intrinsically as valuable, as can be found within fifty miles of the city of New York, in any direction, in lots of five acres or more, for the sum of $25 per acre.

Any person wishing to purchase a five acre lot of good and handsome land, without one foot of water or useless ground on it, can do so by sending $5 as a first payment, and the further sum of $5 a month, until one half is paid, when a warrantee deed and good title will be given, and the remainder part of the purchase money may be paid or secured on the land, to be paid within three or five years, with 6 per cent. yearly interest. Larger lots will be sold on the same terms.

The title is perfectly good—I have a history or deduction of the title complete, certified to by legal men of the highest character, which I will send by mail with maps, pamphlets, and all information, to all purchasers, or those who wish to be informed of these Island lands, by applying to E. H PEAS, of Albany, or CHAS. WOOD, Stationer, 117 John street, N Y. [8-3t]

TIMOTHY SEED for sale at No. 68 State street, Rochester, N. Y., by BRIGGS & BROTHER.

September, 1851.

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Fruit and Ornamental Trees, &c.

THE subscribers solicit the attention of Nurserymen, Orchardists, and Amateurs, to their present large and fine stock of Nursery Articles :

Standard Fruit Trees, for Orchards ; thrifty, well grown, and handsome, of all the best varieties.

Dwarf Trees. for Gardens. The largest stock in the country, and the most complete.

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Palmyra, May, 1851. [5-8t]

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Memphis, Tenn., Aug. 3, 1851. [9-3t*]

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VOLUME XII, FOR 1851.

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DANIEL LEE,
December, 1850. *Rochester, New York*

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.

THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—NOVEMBER, 1851. NO. 11.

THE AGRICULTURAL PRESS.

"THE SOIL OF THE SOUTH," a spirited agricultural journal recently started in Columbus, Georgia, says that the "agricultural press has increased the value of the landed property of the States at least one hundred million dollars, to say nothing of the increased comfort and happiness of the rural population." To some this statement will appear extravagant, but it is unquestionably far below the truth. Society has no wealth which is so uniformly under-estimated as that of agricultural knowledge. Land and labor may be never so abundant, yet, without knowledge, they will forever remain comparatively worthless. Knowledge so far transcends all other powers of production, that no people has ever succeeded in creating wealth by any means, who did not cultivate this field and husband its invaluable treasures. The idea of imparting to five millions of farmers a thorough knowledge of the principles of agriculture, as deduced from the researches of modern science, is too vast for immediate comprehension. Little by little it works its way into the popular mind; and the cheap agricultural journals invented in our time, are the honored means of demonstrating the usefulness of the press for the widest possible dissemination of thought, and the results of practice in rural affairs. The experiments of thousands of cultivators, and the experience of millions, instead of being confined to a few in each neighborhood, become the common property and the professional literature of the country. Experience and experiments truthfully recorded in periodicals, have not only a general and almost universal value, but they will live, if really important, to bless all coming generations in after time. In this view of the subject, it is obvious that experiments in husbandry, tillage, fruit and forest culture, are matters of the highest public concernment; but owing to our lamentable ignorance of the manifold means of improvement within our reach, we make no earnest public effort to place *experimental agriculture* on an enlightened and scientific basis. It is not our purpose to depreciate the every day experience and incidental experiments of common farmers. A knowledge of these communicated through the agricultural press, is highly desirable; but something more than this source of information is due to the greatest industrial interest of the United States. The advancement of American agriculture demands additional aids for the development of *new* and useful facts.

We have carefully read most of the agricultural papers published in this country up to this time, and not a few similar works imported from Great Britain and the Continent; and we speak advisedly when we say that the amount of *new facts* brought to light during the past year in the civilized world, are few, and not a tenth part of what they might have been. When the press has little that is useful to communicate, it loses its consequence in the estimation of practical farmers, and all progress for the time is arrested. A steady, not a fitful advancement, confers the greatest benefits on the whole farming interest. To secure this advantage, the friends of improvement should write often for agricultural journals, and endeavor to communicate as well as learn every useful fact. Facts concisely and clearly stated, are always interesting to sensible readers; and a reasonable amount of theories based on such facts, are also acceptable. Under the most favorable auspices, the numerous sciences and arts which constitute our complex profession, require constant mental, and not a little physical labor, if one would excel therein. He may talk and write fluently on rural topics, with a very superficial knowledge of the principles of agriculture; but he is more likely to mislead than instruct his readers and hearers, unless he has given up his life to the critical investigation of the arts or sciences of which he treats. The phenomena of vegetable and animal life, as modified by different soils, climates, systems of culture, treatment, and management, can not be reasonably comprehended, nor skillfully handled by agricultural writers, except so far as they have been carefully studied. Before one can be a wise instructor, either in agriculture, horticulture, or any department of natural science, he must first learn what he hopes to teach. And to learn well, we all need a fair opportunity to investigate the natural laws relating to the origin, quality, and temperature of soils, the growth of plants and animals, the laws which regulate their health, and at the same time learn the practice of tillage and husbandry by daily experience on a well conducted farm. In short, there is needed a perfect union of intellectural and physical culture, a joint effort of mind and body, to make a finished agriculturist. If we say nothing of the development of the moral principle in man in this connection, it is not because this element is overlooked, or deemed of no account. Morality is a subject that does not legitimately pertain to agricultural production, nor to the physical sciences. The profession of agriculture has for its object the promotion of the material interests of society; and it eminently deserves the undivided attention of such as write habitually for the agricultural press. Neither writer nor reader can increase his professional knowledge without care, study, and effort to improve. Careless reading, careless writing, and neglect of study and of schools are prominent defects in the rural literature of this country. More pains ought to be taken to separate the chaff from the wheat in what we publish in our periodicals, the Transactions of our State Boards and Societies, and annual Reports. These are becoming quite voluminous; and with much matter that is truly valuable there is accumulating a vast quantity for which the rising generation can have no possible use. Solomon said in his day, that "to the making of many books there is no end." Had he lived in our time of steam presses and cheap literature, he would doubtless have been still stronger impressed with the endlessness of the book business. If we printed fewer papers and books, and made them better, or made them better without any diminution in quantity, the community would be greatly benefitted. But until children are taught a more refined and elevated taste, and have their knowledge of agricultural geology, chemistry, physiology, mechanics, and meteorology, what it should be when they become men, their agricultural reading must be of the most elementary character through life. If every reader of agricultural books had a knowledge of the terms necessarily used to give names to newly discovered things, and an account of the relations which these things bear to each other, good books would be not merely perused with pleasure, but diligently studied with great profit. To the unitiated, the language of science is an unknown tongue. This tongue can be best learned in a school when the pupil is young, with the aid of a competent teacher. Agricultural journals cannot do everything, nor the half of what some appear to expect of them. Rural arts and sciences are too important and too valuable to be attainable by a single day's work, or in exchange for a dollar in money. If we will not use the means, nor pay the price of real knowledge, it can never be ours. We speak plainly, for we feel the importance of our subject. If American farmers have brought their sober minds to the conclusion that the laws of nature as displayed in the mineral, vegetable, and animal kingdoms, which govern the natural fruitfulness of the earth, and the results of their labor, should never be studied by their sons, and that the man who raises oats ought to know no more of the things that make oats than the horse that eats them, even then we shall regard it as our duty to work on while life lasts, and reverse this erroneous judgment, or do our best to attain that consummation.

Agricultural colleges have been condemned without a trial. This is unfair treatment, and their friends have a right to demand a reasonable opportunity to demonstrate the practical utility of these institutions. Medical science has no better claims to public colleges supported in part by the Legislature, than agricultural science; and if the latter is wholly neglected by the people of the State of New York, while the State supports five or six medical schools with six or eight professors in each, it shall not be the fault of the Genesee Farmer.

See that all your preparations for winter are complete, so that when the storms come you sit by a pleasant fire and read some valuable book, with a mind at ease.

EASTERN VIRGINIA.

Nowhere has the farming interest advanced with more rapidity than it has of late years in the Tidewater District of Virginia. It was stated by a gentleman from Lancaster county, the other day, that there was annually more than double the quantity of wheat sown in his district than was *reaped* twenty years ago. Another large proprietor observed that he had realized upwards of 15 per cent. on his investment in land cultivated in wheat. This change has been brought about by the application of Marl, inexhaustible in that quarter, and the free use of Guano—one farmer in Westmoreland, we learn, having last year applied twenty tons of that manure with striking effect in the improvement of his lands.—*Westchester Virginian.*

We have witnessed the extraordinary and deeply interesting effects of good guano in the production of wheat on poor lands; and we regret our inability to make every reader understand how 100 lbs. of bird dung operates to organize 700 lbs. of ripe wheat plants, *more* than would grow without the manure. A scientific principle is involved in this matter which applies equally to every crop produced by the labor and care of the husbandman. What the unlearned farmer does not clearly see, is the relation that manure bears to the plants for the nourishment of which it is applied. He fails to discover *how it happens* that 2000 lbs. of manure brought from Peru is worth $50, while a like weight of common barnyard manure is not worth 50 cts. Why one kind of food for plants is worth ten times more than another kind in general use, is a problem which most practical tillers of the earth have yet to solve.

Guano in its best condition, contains in a highly concentrated form the most precious elements of fertility, which are deficient in quantity in ordinary soils. And they are deficient, mainly, because all the people that subsist on the fruits of improved land, foolishly waste the only things that can by any possibility make bread, meat, wool, potatoes, and cotton. The principal value of guano, in the long run, will be to stimulate hard-working men and boys *to think*—to study the great and honorable profession of agriculture. They now over-estimate the money value of mere muscular toil, and sadly under-estimate the worth of well-cultivated common sense. They believe in common sense, but it must be the indigenous offspring of the mind, the sense of wild savages, not common sense developed under the instruction of teachers who have made the systematic investigation of the laws of vegetable and animal growth the business of their lives. The philosophy of manures, the economical improvement of soils, and the skilful production of wheat and other crops, involve principles, and have their foundation in natural laws, which cannot be learned by simply holding a plow, or carting and spreading dung from a stable or barnyard. We must first improve ourselves, then all other improvements will be easy.

Use of Guano and Lime.—I some fifteen years ago was among the first who introduced lime as a fertilizer on our farms, since which most every farmer is making efforts to procure it, although at considerable cost. We have to haul our lime from 12 to 15 miles, at a cost of 15 cents per bushel.

Within the two last years I have been experimenting with the Peruvian guano, and so far as it relates to my wheat crop, it has had the happiest effect.—Where I guanoed, the wheat was one-third better than where I limed at the rate of fifty bushels to the acre, accompanied with a good supply of barn-yard manure alike in all other particulars. A.

BRITISH AND AMERICAN AGRICULTURE.

In the October number "An Old Farmer" very logically reasons on the various "causes" that might account for the superiority of British agriculture, and rightly concludes that it is not owing to a lack of general education in America, or to the inferiority of soil and climate, or any national characteristic, or ignorance of European improvement, or known scientific facts, but it may, to a certain extent, be attributed to pecuniary circumstances, for though few of the best British farmers *own* their farms, yet they employ a capital of at least fifty dollars per acre in its cultivation; while here a farmer sinks the whole of his money in the soil, and has not, in too many instances, sufficient left to cultivate it so well as he desires. If, too, he is in debt, he is anxious to discharge it, and tills his soil too hard—"scourges" it—or, in other words, cultivates the *cereal, cash-selling* grains as long as they will grow, thus permanently impoverishing his soil—killing the goose that lays the golden eggs.—He has too, comparatively, no local attachment and would pull up stakes any day could he get a few dollars per acre more for his farm than he thought it worth. Suggest under-draining, or any other improvement that would ultimately pay cent per cent., and he will tell you the farm would not sell for any more than at present, and the money would be lost, instead of thinking as a British tenant farmer does, if *I* do not get the benefit my son will.

Another, and the principal, reason of the superiority of British farming is, that they have a *better market* and can afford to use artificial manures, and other means for increasing their crops, which, from the low price of his products, the American farmer cannot economically adopt; and though for the perfection of cereal grains this is the best climate, yet for the growth of turneps, vetches, &c., which by collecting ammonia from the atmosphere so materially benefits the soil, England, and especially Scotland, has the advantage.

A good crop of turneps, of twenty tons of bulbs and eight tons of leaves, contains the following substances:

	Fresh.	Water.	Dry matter.	Ash.	Nitrogen.	Phosph'ic acid.	Potash.	Soda.	Chloride sodium.	Sulphuric acid.
Bulb, ...	40000	36000	4000	280	80	22	123	5	19	28
Leaf, ...	16000	14080	1920	230	57	11	50	1½	13	27
Totals......	56000	50080	5920	510	137	33	173	6½	32	55

A glance at the above table will show the great value of the turnep crop in a system of rotation.—It will be seen that it collects from the atmosphere nearly three times as much nitrogen as an ordinary clover crop; that it abounds with potash, which, however, is not exported from the soil but left in the manure in a fit state for assimilation by the ensuing crops. It may be here remarked that turneps contain but little phosphoric acid, yet when this substance is applied in a soluble form it has a most remarkable stimulating effect on the plant, usually trebling the crop by its sole application, while potash, though the plant contains a large quantity, yet its artificial application seldom does any good. This, and similar facts, seems to explode the common opinion that the manure which it is best to use can be known from the analysis of the plants to be grown. It is the "turnep crop" that constitutes the chief difference of American and British agriculture. It is that which has so greatly improved English farming in the last half century, since it has been extensively cultivated. It is a common saying of the English farmers, "If we can get a good crop of turneps we are sure of all other crops." Hence the great pains and expense that is bestowed on its cultivation. Its cultivation has rendered unnecessary the long or summer fallow, and land has not now, as formerly, to be in grass for four or five years to *rest;* and much larger crops of wheat are now grown every fourth year than under the old system, every eighth.

The turneps are ready for use by the first or second week in October; they are either eaten off by sheep on the land, or are drawn home and fed to cattle or sheep in yards, using plenty of straw for "litter," which is thus made into good manure.—The best farmers, too, give to their fatting sheep one pound of oil cake and a pound of clover-hay-chaff per day each, with as many turneps as they will eat.—American oil cake is preferred, as it contains—from being better pressed—more *nitrogen* than the English, but it is necessary to have it analyzed before purchasing, as Brother Jonathan has been lately coming a yandce dodge over unsuspicious Johnny by mixing sawdust, or other valueless substance, with the Linseed, thus greatly reducing the value of the oil-cake. When good, it contains five per cent. of nitrogen, and is consequently very nutritious, and the manure from its consumption exceedingly valuable. When oil-cake is used in the field, it is usual to draw off the large bulbs for the cattle in the yards, leaving the tops and smaller turneps to be consumed on the land; were the whole crop eaten on the soils, and oil-cake used, the land would be too rich and the crops laid.

Mutton and beef are worth a shilling a pound, and it therefore pays to be at considerable expense in fatting it; still it would not pay to use oil-cake but for the great value of the manure, and there are thousands of good farmers who prefer to purchase artificial manures than to consume their grain or purchase oil-cake or other artificial food for stock. Much less capital is required, and the *effects* are speedier and more apparent, though not so lasting and beneficial to the soil.

The "cause" of the superiority of British farming, then, is not the superior scientific knowledge of the British farmer, (for it must be admitted that the land *owning* farmers of this free country are a far more intelligent, knowledge-seeking, and *sober* race, than their transatlantic brethren,) but to the greater physical difficulties under which our farmers labor, viz: a comparative low price of produce and meat, and a climate not well adapted to the nitrogen collecting plants of the British Isles.

It is my opinion, not hastily formed, nor without some means of arriving at just conclusions, that the most scientific practical farmer of England or Scotland could not take a farm in Western New York and raise wheat for a less price per bushel than numbers of intelligent, wealthy farmers of this district. The fact is, an English farmer cannot increase his wheat crop by artificial manures, of which large quantities are used, for less than *eighty cents* per bushel, and it is vain for the farmers of the eastern counties of this State to think of profitably increasing the fertility of their poor weak soils, so long as they have to contend with the fertile new soil of the west, and *low prices.* In a new country where wheat can apparently be grown for fifty cents per bushel, the soil is injured, for each bushel raised, that sum, which added to the price obtained would make the value that at which wheat can be grown without impoverishing the soil. Thus if it cannot be grown, and keep the soil in its original fertility by manure, plowing in clover, or other means, for less than eighty cents per bushel, and the farmer. has to sell for fifty cents, with each bushel he sells thirty cents worth of his soil.

As the population and manufactures of the country increase, as they necessarily must do under a wise protective duty on foreign goods that can be manufactured at home, where there is a superabundance of raw material, farmers will have all the advantages of a home market and high prices, especially of *meat*, the production of which will enable them to grow more wheat and increase the value and fertility of the farm. Then, too, the poorer, exhausted soils of the east, will be scientifically cultivated and delight the eye and fill the pocket by luxuriant clover and heavy harvests. In the meantime experiments should be made *in this climate* on various nitrogen-collecting plants, as also on the cereals, especially Indian corn, of which little is known in this or any other country, and egregious errors may be committed in calculations founded on experimental data of another hemisphere, though they may suggest the direction of inductive scientific inquiries. It is not at all improbable that turneps will be found a profitable crop and be extensively grown when the proper management for their growth *here* shall be understood; but this can only be ascertained by repeated experiments systematically carried out.

It has occurred to me that were a row of turneps sown between every row of Indian corn, which it would perhaps be necessary to plant a little wider—say five feet—and to keep clean, the plants would be shaded from the hot sun and flourish. If two hundred weight per acre of super-phosphate of lime, that will no doubt soon be manufactured from the rich mineral phosphate lately discovered in various parts of the country, was *drilled with the seed*, there is little doubt a large crop would be obtained. It is hoped the gentleman referred to at the commencement of this letter, or some other enterprising agriculturists, will make the experiment and give the results, which if favorable, as I expect, will remove *one of the "causes"* of the *over-estimated* superiority of British agriculture. JOSEPH HARRIS. — *Rochester, N. Y.*

LUXURIANT PASTURAGE.

MESSRS. EDITORS:—In the July number of the Farmer I noticed an article entitled "Wretched Pasturage," the language of which sounds strange to your readers in Steuben. I have no doubt but they laughed, as I did, when they read it, and if you could have told it to our "Hornby brindles," so they could understand, I have no doubt but they would have laughed too, standing as they do in pastures of clever and timothy up half mid-sides. We know, in Hornby, that some of our land is rather heavy, but if it is, we can have cash from it without the expense to which our grain-growing neighbors are subject. The good farmers in this town are not troubled in their sleep to invent means by which to clear the interest on their property. There are farmers in this town who annualy clear twice and thrice the interest on the money which their farms are worth. It is true that there are some hide-bound, ignorance-loving, anti-progress farm skinners, who make no visible progress. But to find such pastures as you speak of, you must visit us when some over-stocked field which never heard of gypsum has been denied rain for weeks. In short, if you wish to see luxuriant pastures, and wealth-giving meadows, excelled *by none* in the State, you should seek them in Hornby.

Our lands increase in fertility under cultivation, if not too much plowed. Yet there are fields in this town which produced twelve, fifteen, and twenty crops of oats in succession, and yet grow a wealth of grass, under good management, afterward.

A plan much practiced in this town for feeding cattle, is to stack the hay on the meadow, or put it in small barns or barracks, from which it is scattered upon the lands that produced it. When there is a large stock of cattle to be fed, it saves much labor to haul the hay to different parts of the field where all can have a chance. When your readers, of grain-growing notoriety, are disposed to jest at our expense, please remind them that they are not so far in the advance, but what, in this steam and lightning age, we may overtake them; and if we cannot cure our heavy land, we at least have the consolation that we have no "Wretched Pastures." WM. H. GARDNER. —*Hornby, N. Y., Sept.*, 1851.

Our Hornby friends may well be satisfied with choice grazing lands that yield from 14 to 21 per cent interest on their market value; but let them beware lest the few precious atoms in their soils, that form the bones of their cattle and other stock, are not all extracted and either sold or lost before they dream of such a misfortune. The things that really make beef, cheese, wool, and horse flesh, are not so abundant in the surface of the earth, even in the fields of luxuriant clover and timothy of Hornby, as to be perfectly inexhaustible. All manure, bones, ashes, and vegetable substances of every kind, must be husbanded with the closest economy, and wisely applied to the needy soil, to avoid its deterioration in coming years. Time will demonstrate that no land produces good crops from air and water *alone*—that the elements of fertility are annually consumed in growing plants, which elements must be restored to the ground or its impoverishment is inevitable.

ANALYSIS OF LONG BLOOD BEET.

BY J. H. SALISBURY, M. D.

THE specimens examined were furnished by Mr. Douw, of Greenbush. They were large, fleshy, crisp, and contained about the average amount of woody fibre. Mean length of the roots of the four samples analysed, 20 inches; mean widest diameter, 3 inches; mean length of tops, 21 inches; mean weight of each root, 2 lbs. 2 oz.

Per centage of water, dry matter, and inorganic matter.

	Fresh Roots.	*Fresh Tops.*
Per centage of water,	89.095	90.570
" dry matter,	10.905	9.430
" inorganic matter,	1.080	1.850
" inorganic matter in dry matter,	9.072	19.618

The above results show this variety of beet to be more highly charged with water than the carrot, artichoke, or parsnip. The roots contain a trifle over 89 per cent. of water; the tops 90.57 per cent.—This leaves about 11 per cent. of dry matter in the roots, and 9½ in the tops. 100 lbs. of the fresh roots contain a little over 1 lb. of inorganic matter; while 100 lbs. of tops yield 1.85 lbs. 100 lbs. of the dry roots contain 9.072 lbs. of inorganic matter; and 100 lbs. of the dry tops furnish 19.618 lbs. 9259 lbs. of the fresh roots contain 100 lbs. of inorganic matter. 5405 lbs. of the fresh tops yield 100 lbs. of inorganic matter.

Composition of inorganic matter.

	100 lbs. of inorganic matter of	
	Roots.	*Tops.*
Carbonic acid,	16.27	21.90
Silicic acid,	0.85	2.55
Phosphoric acid,	9.85	8.20
Phosphate of iron,	1.15	3.75
Lime,	1.50	10.25
Magnesia,	1.15	4.10
Potash,	13.10	7.70
Soda,	53.65	37.30
Chlorine,	0.81	0.60
Sulphuric acid,	1.65	3.05

By ordinary culture, 20 tons can easily be raised to the acre. Twenty tons of the fresh roots contain 432 lbs. of inorganic matter. These 432 lbs. contain the following bodies, in about the proportions given below.

Carbonic acid,	70½	lbs.
Silicic acid,	3½	"
Phosphoric acid,	42½	"
Phosphate of iron,	5	"
Lime,	6½	"
Magnesia,	5	"
Potash,	56½	"
Soda,	232	"
Chlorine,	3½	"
Sulphuric acid,	7	"

In round numbers, the following materials, in the quantities mentioned below, furnish more than an adequate supply of nourishment, to an ordinary soil, for 20 tons of beet roots: 300 lbs. of ashes, 200 lbs. of common salt, and 6 tons of good barn-yard manure. The tops are generolly left upon the ground, hence it is not necessary to include them in the materials removed from the soil.

Proximate organic composition of the roots.

	100 *lbs. of Fresh Roots.*	100 *lbs. of Dry Roots.*
Water,	89.095	
Fiber,	2.310	20.860
Sugar,	6.125	55.327
Dextrine,	1.035	9.347
Casein,	0.040	0.361
Albumen,	1.155	10.431
Starch,	0.313	2.815
Resin,	0.057	0.519
Gluten	0.020	0.180
Red coloring matter,	0.018	0.158
Fat,	trace	trace

In the above analysis, we see the nutritive power of this variety of beet. The average amount of dry matter in the fresh, mature roots does not vary much from 10 per cent. One ton of the fresh roots contains of sugar, 122½ lbs.; of dextrine, 20.7 lbs.; of albumen, casein, and gluten, 24½ lbs.

Ultimate organic analysis of 100 *parts of dry roots.*

Nitrogen,	1.445
Carbon,	41.435
Oxygen,	42.256
Hydrogen,	6.514
Inorganic matter,	9.072

It will be seen from this last analysis that 100 lbs. of dry beet roots contain about 1½ lbs. of nitrogen, 41½ lbs. of carbon, 42½ lbs. of oxygen, 6½ lbs. of hydrogen, and 9 lbs. of inorganic matter. The organic part is almost entirely made up of sugar, fiber, albumen, dextrine, and starch; the inorganic part, of soda, potash, and phosphoric acid.

AGRICULTURAL ADDRESSES.

We have read with pleasure many of the Agricultural Addresses delivered at State and County Fairs this fall. Every farmer and every farmer's wife should read the extract below from Maj. Patrick's address before the Jefferson County Agricultural Society, in this State:

"An industrious pair, some 20 or 30 years ago, commenced the world with strong hands, stout hearts, robust health and steady habits. By the blessing of Heaven their industry has been rewarded with plenty, and their labors have been crowned with success. The dense forest has given place to stately orchards of fruit, and fertile fields, and waving meadows, and verdant pastures, covered with the evidences of worldly prosperity. The log cabin is gone, and in its stead a fair white house, two stories, and a wing with kitchen in the rear, flanked by barns, and cribs, and granaries, and dairy houses.

"But take a nearer view. Ha! what means this mighty crop of unmown thistles bordering the road? For what market is that still mightier crop of pigweed, dock, and nettles destined, that fills up the space *they call* the "garden?" And look too at those wide, unsightly thickets of elm, and sumach, and briers, and chokecherry, that mark the lines of every fence!

"Approach the house, built in the road, to be *convenient*, and save land! Two stories and a wing, and every blind shut close as a miser's fist, without a tree, or shrub, or flower to break the air of barrenness and desolation around it.—There it stands, white, glaring and ghastly as a pyramid of bones in the desert. Mount the unfrequented door-stone, grown over with vile weeds, and knock till your knuckles are sore. It is a beautiful, moonlight October evening; and as you stand upon that stone, a ringing laugh comes from the *rear*, and satisfies you that somebody lives *there*. Pass now around to the rear; but hold your nose when you come within range of the piggery, and have a care that you don't get swamped in the neighborhood of the sink-spout. Enter the kitchen. Ha! here they are all alive, and here they *live* all together. The kitchen is the kitchen, the dining-room, the sitting-room, the room of all work. Here father sits with his hat on, and in his shirt sleeves. Around him are his boys and hired men, some with hats, and some with coats, and some with neither. The boys are busy shelling corn for samp; the hired men are scraping whip stocks and whittling bow pins, throwing every now and then a sheep's eye and a jest at the girls, who, with their mother, are *doing up* the house-work. The younger fry are building cob-houses, parching corn, and burning their fingers. Not a book is to be seen, though the winter school has commenced, and the master is going to board there. Privacy is a word of unknown meaning in that family; and if a son or daughter should borrow a book, it would be almost impossible to read it in that room; and on no occasion is the front house opened, except when "company come to spend the afternoon," or when things are brushed and dusted and "set to rights."

"Yet these are as honest, as worthy and kind-hearted people as you will find anywhere, and are *studying out* some way of getting their younger children into a better position than they themselves occupy. They are in easy circumstances, owe nothing, and have money loaned on bond and mortgage. After much consultation, a son is placed at school that he may be fitted to go into a store, or possibly an office, to study a *profession*; and a daughter is sent away to learn books, and manners, and *gentility*. On this son or daughter, or both, the hard earnings of years are lavished; and they are reared up in the belief that whatever smacks of the country is vulgar—that the farmer is *necessarily* ill-bred, and his calling ignoble.

"Now, will any one say that this picture is overdrawn? I think not. But let us see if there is not a ready way to change the whole expression and character of the picture, almost without cost or trouble. I would point out an easier, happier and more economical way of educating those children far more thoroughly, while at the same time the minds of the parents are expanded, and they are prepared to enjoy, in the society of their educated children, the fruits of their own early industry.

"And first: let the *front* part of that house be thrown open, and the most convenient, agreeable and pleasant room in it be selected as the *family room*. Let its doors be ever open; and when the work of the kitchen is completed, let mothers and daughters be found *there* with their appropriate work.—

Let it be the room where the family altar is erected, on which the father offers the morning and the evening sacrifice. Let it be consecrated to Neatness, and Purity, and Truth. Let no *hat* ever be seen in that room on the head of its owner; let no *coatless* individual be permitted to enter it. If father's head is bald (and some there are in that predicament) his daughter will be proud to see his temples covered by the neat and graceful silken cap that her own hands have fashioned for him. If the coat he wears by day is too heavy for the evening, calicoes are cheap, and so is cotton wadding. A few shillings placed in that daughter's hand ensure him the most comfortable wrapper in the world; and if his boots are hard, and the nails cut mother's carpet, a bushel of wheat once in three years will keep him in slippers of the easiest kind. Let that table which has always stood under the looking-glass, *against the wall*, be wheeled into the room, its leaves raised, and plenty of useful (not ornamental) books and periodicals be laid upon it. When evening comes, bring on the lights—and plenty of them—for sons and daughters—all who can—will be most willing students. They will read, they will learn, they will discuss the subjects of their studies with each other; and parents will often be quite as much instructed as their children. The well conducted agricultural journals of our day throw a flood of light upon the *science* and *practice* of agriculture; while such a work as Downing's Landscape Gardening, laid one year upon that centre table, will show its effects to every passer by, for with books and studies like these a purer taste is born and grows most vigorously.

"Pass along that road after five years' working of this system in the family, and what a change! The thistles by the roadside enriched the manure heap for a year or two, and then they died. These beautiful maples and graceful elms, that beautify the grounds around that renovated home, were grubbed from the wide hedge-rows of five years ago; and so were those prolific rows of blackberries, and raspberries, and bush cranberries, that show so richly in that *neat garden*, yielding abundance of small fruit in their season. The unsightly out-houses are screened from observation by dense masses of foliage; and the many climbing plants that now hang in graceful festoons from tree, and porch, and column, once clambered along that same *hedge-row*. From the meadow, from the wood, and from the gurgling stream, many a native wild flower has been transplanted to a genial soil, beneath the homestead's sheltering wing, and yields a daily offering to the household gods, by the hands of those fair priestesses who have now become their ministers. By the planting of a few trees, and shrubs, and flowers, and climbing plants around that once bare and uninviting house, it has become a tasteful residence, and its money value is more than doubled. A cultivated taste displays itself in a thousand forms, and at every touch of its hand gives beauty and value to property. A judicious taste, so far from plunging its possessor into expense, makes money for him. The *land* on which that *hedge-row* grew five years ago, for instance, has produced enough since to *doubly pay* the expense of grubbing it, and of transferring its fruit briers to the garden, where they have not only supplied the family with berries in their season, but have yielded many a surplus quart, to purchase that long row of red and yellow Antwerps and English gooseberries; to say nothing of the scions bought with their money, to form new heads for the trees in the old orchard.

"Those sons and daughters sigh no more for town or city life, but love with intense affection every foot of ground they tread upon, every tree, and every vine, and every shrub, their hands have planted, or their taste has trained. But stronger still do their affections cling to that *family room*, where their minds first began to be developed, and to that centre-table around which they still gather with the shades of evening, to drink in knowledge, and wisdom, and understanding.

"The stout farmer who once looked upon his acres only as a laboratory for transmitting labor into gold, now takes a widely different view of his possessions. His eyes are opened to the *beautiful* in nature, and he looks with reverence upon every giant remnant of the forest that by good luck escaped his murderous axe in former days. No leafy monarch is now laid low without a stern necessity demands it; but many a vigorous tree is planted, in the hope that the children of *his* children may gather beneath the sreading branches and talk with pious gratitude of him who planted them.—No longer feeling the need of taxing his physical powers to the utmost, his eye takes the place of his hand, when the latter grows weary, and *mind* directs the operations of labor. See him stand and look with delighted admiration at his sons, *his educated sons*, as they take hold of every kind of work, and roll it off with easy motion, but with the power of mind in every stroke.

"But it is the proud mother who takes the solid comfort, and wonders that it is so easy after all, *when one knows how*, to live at ease, enjoy the society of happy daughters and contented sons, to whom the *city folks* make most respectful bows and treat with special deference as truly *well bred ladies and gentlemen*.

"Now, this is no more a fancy picture than the other. It is a process that I have watched in many families, and in different States. The results are everywhere alike, because they are natural. The same causes will always produce the same effects, varying circumstances only modifying the intensity."

SENATOR DOUGLASS' ADDRESS AT N. YORK STATE FAIR.—We have room only for a few extracts from Senator DOUGLASS' address:

"So long as agriculture was the exclusive occupation of an enslaved peasantry, it produced little more than the necessaries of life. It remained a mere sluggish labor; consuming men's physical strength, and descending, with little improvement, from father to son, among those who were born and bred to it. Happily for the progress of mankind, the condition of the agricultural laborer has changed in many parts of the world, and it is no small source of pride and gratification for us to know that it is the example of America which has wrought the change and restored agriculture to its original rank among the most honorable occupations of men. It is now a profession calling to its aid science and the mechanic arts, and, in its every branch, the inventive genius of man. The farmer, instead of merely following the beaten track of his ancestor, now brings to his pursuit his own powers of inquiry and investigation. Chemistry teaches him the nature and quality of the ingredients composing his soil, the species of crop most suitable to its productive power, and the kinds of manure he must use, and the proportion of cattle he must keep to make his farm productive. As he acquires a knowledge of chemistry, of agricultural geology, and of the physiology of plants and animals, his crops become more certain, and his reward more sure. Armed with knowledge, the fertility of man's mind has discovered remedies for the sterility of soils, and found means of guarding the fruits of his labor even against the vicissitudes of climate. This is not all. The American farmer possesses the means of multiplying labor, and thereby its reward, by the most ingenious and effective machinery."

"I would now say a few words on the growth of timber, a subject much neglected by our countrymen. Yet timber is one of the most valuable productions of the soil, and an indispensable requisite to the improvement and civilization of man. No country on earth is, in this respect, more blessed than our's. None can boast of such a variety of forest trees, adapted to the various uses of farming, the mechanic arts, architecture and ship-building. In no other country do we find such magnificent shade trees, such extensive and superb primeval forests, and in no part of the world is the reproductive power of the soil less exhausted than in our own. Yet with all these incalculable advantages, and with our unbounded coal-fields, the want of fire-wood is already felt in some districts which like the prairies of the west, are naturally destitute of timber, or in which locomotives and steamboats are consuming the article faster than it can be reproduced in the ordinary course of nature. There is also reason to believe that the extreme desire of pressing civilization forward, and of fertilizing the wilderness in the shortest time, induces many a hardy pioneer of the West to enter somewhat enthusiastically on the "extermination" of our woods, when considerations not merely poetical, but economical and practical, would in more than one instance call out to him "Woodman, spare that tree!"

"Trees are not merely useful and ornamental, but also by their mere existence—by the breathing of oxygen—eminently conducive to health. They are the companions of man, as much so as some of the domestic animals, and have as such, acquired a certain right to his protection. Many localities which I could name, especially near the sea coast, have been completely shorn of timber; and experience has shown that a forest once entirely cut down, will not grow up again and reproduce the same kinds of timber. Much inconvenience is now felt in consequence, and the evil is progressive, threatening the comfort and interests of farmers, mechanics, and all classes engaged in industrial pursuits."

"It would seem as if our diplomatic and consular systems were organized simply in regard to the great interets of commerce and manufactures; but could they not be made equally subservient to the mother interest of agriculture and its coordinate branches? While our consuls report on the commerce and manufactures of foreign countres, would it not be well to require them to report also on the different agricultural productions of those countries, and the improvements which from time to time may be introduced in their culture? Might they not be made to furnish detailed accounts of the different modes of cultivation, the manner of preserving crops, the agricultural implements in use, and the various kinds of manures resorted to as means of preserving or restoring soils? Could they not be induced to report on all the variety of fruit, shade, and ornamental trees, and forward specimens of seeds, plants, roots, and bulbs, for gratuitous distribution, accompanied by proper directions for their use? An occasional paper on the domestic animals of different countries, and the mode of breeding them and improving the breed, would be particularly acceptable, should the official business of the consul admit of such useful and interesting digressions.

"These reports would not be expected to be made quarterly, as are those on commerce and manufactures. An annual paper would comprehend all that is desirable, and would certainly be no great tax on the consul's time and patience. In many instances all the materials for his report would be readily furnished him by the official politeness of the government to which he is accredited, and in others he would find all the required information already collected in some printed form.

"By such simple means a vast amount of information from all parts of the globe could be collected, which in your hands, and in the hands of other corresponding associations would be a most powerful auxiliary in the dissemination of agricultural knowledge. And I would, in connection with this subject, respectfully suggest the propriety of establishing a great NATIONAL AGRICULTURAL SOCIETY, which in immediate connection with the Agricultural Societies in the different States and Territories of the Union, and the Patent Office, or some other appropriate governmental bureau, might easily posses itself of all the necessary information, to present in its annual report an elaborate and comprehensive view of the agricultural condition of our whole country.—That Society would also be the proper medium for receiving the specimens of seeds, plants, bulbs, &c., forwarded from foreign countries by our consuls, together with the collections which, under existing regulations, our navy is in the habit of making, and of distributing them among the different States and Territories.

"The NATIONAL AGRICULTURAL SOCIETY would also be the proper channel of communication, and of effecting agricultural exchanges, between the several local societies of the United States, and the various agricultural and learned associations in foreign countries. It would, in fact, be the great centre of agricultural information, which would diffuse knowledge in a thousand different directions, over the whole length and breadth of our land, and to which every farmer could confidently apply for advice and instruction on any subject connected with his profession.

"And here I may pause to inquire whether the Smithsonian Institute, at the seat of the National Government, might not, *ex-officio*, become a colaborer and assistant of the National Agricultural Society, in all its literary and scientific branches? Might not the Institute aid the Society in all its periodical publications, and, in conjunction with it, diffuse the greatest amount of "useful knowledge among men?" Surely the philanthropic intention of the worthy founder of that institution, could not be carried out in a more suitable and effective manner, than by making it thus subserve the great interests of agriculture in all its branches. Whatever its present usefulness may be, it can perform no higher duty than contribute in the most efficient manner, to the perfection of that species of human industry, which is the parent and promoter of all others, and on which the safety and permanence of our institutions rest as on their broadest foundations."

* * *

FENCES.—Examine the fences which enclose your fields—do it yourself, and have every weak place made strong. Failing pasture tempts stock to break in and destroy. Care in this regard now may save you from the vexation and loss hereafter.

HOGS RUNNING AT LARGE IN WINTER.

OUR friend, Mr. A. J. HEAD, of Fairfax Co., Virginia, justly censures (in a business note) the common practice in that region, and in some others, of letting hogs run all over a farm in winter to root up meadows and eat every clover root, as well as top, in order to escape starvation. In sections where there is little snow or frost, and where English grasses and clovers require much care to flourish, droves of swine or sheep, and herds of cattle, often do immense injury to the fields trampled in wet weather, and having every blade of grass eaten into the ground. Farmers in Fairfax that provide a plenty of forage for their neat stock in winter, and grain or roots for their hogs, and keep up both, carefully saving all their manure, are fast improving the soil and are destined to realize a handsome profit on their business. They get 31 cts. a pound for their butter by taking it ten or fifteen miles to Washington, Georgetown, or Alexandria. We would suggest that they give to pastures and meadows a top dressing of lime and wood ashes, if not more than ten bushels per acre—five of lime, and five of ashes. A larger dose will be better.—All the land in the neighborhood of Washington lacks lime and potash, particularly old and long cultivated plantations.

* * *

THREE THINGS NECESSARY TO MAKE AN AGRICULTURAL PLAN VALUABLE.—1st. Before any plan is placed before the public, it would be well for the author to test it by experience, and see whether it would carry out the object for which it is recommended. At any rate he should let reason and common sense dictate.

2d. He should cast his eyes around him, and see for whom he is writing. He ought to know that a large majority of the farmers in this country are in limited circumstances. These are the ones he ought to help—the rich can help themselves. And if he wishes his plan to take and do much good he should be careful not to attach much expense to it, except labor. This will enable them to help themselves, for such have ways enough to lay out their hard earned cash without paying large sums for new plans.

3d. He should express his views in as few words as possible. This last proposition I guess the editors will say is right, and so says GREEN FARMER.

* * *

THE WAY TO RAISE WHEAT AFTER CORN.—Take green sward land highly manured, and well plowed about the first of May; then cultivate it well and plant corn four feet apart each way, rows straight, and keep it well tilled until the last week in August. Then top the stalks, and as soon as cured carry them off the ground. Then sow wheat among the corn, and cultivate it thoroughly both ways with one horse. Husk the corn at your leisure, and about the first of May following take a scythe and mow the stalks close to the ground. The wheat will not winter kill. TITUS CANFIELD.—*West Bloomfield.*

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SORE NECKS IN OXEN.—This is caused by using yokes that do not fit the neck, or by working the oxen in wet weather. It can be prevented by using good yokes and applying oil or lard to the neck in stormy weather.

Remedy.—Use ointment made of lard and beeswax; or make a strong wash of white-oak bark, and apply it night and morning.

S. W.'S NOTES FOR THE MONTH.

The Seneca County Fair at Waterloo has just closed this 10th day of October. I have no time for details. Suffice it to say that our village was never before thus animated by all sorts of animated nature, biped and quadruped of both sexes, including even the tiny, puling babe whose age is reckoned by weeks and days, not months. All agree that it was the best show and plowing match ever before witnessed in this little superfertile county of Seneca. The address by Editor Sentell, of the "Clarion," was capital, but nothing more than might have been expected from a man who adds to a trained pen a practical knowledge of the farmer's labors and the farmer's wants. The President of the State Society, Mr. Delafield, Judge Sackett, and other rural veterans, were on the spot —not dawdling spectators, but aiding the officers of the Society, and at all times *au fait* to the best interests of the Fair. The county of Seneca has a right to be proud of giving such a President as John Delafield to the parent Society, of whom it has been said, (maliciously perhaps,) that he was almost the only speech maker at Rochester who made farming and the farmer the sole issue, or rather that he was the only speaker who came there with no other than the woodsman's axe to grind on the great festival grind stone.

New York as it is.—Go into a thirty thousand dollar house ; as you step on the thick Wilton carpet—without noticing the lesser *et ceteras*—cast your eyes up to the lofty ceiling supported by pillars like a cathedral ; then look at the superb sofas, the soft rocking chairs, in their variegated silk covers, scattered about the spacious saloon in promiscuous confusion ; then ask yourself how this man's grandchildren are to improve on this style of living, as he has improved on the homely simplicity of his grandfather. Here is a question for the political economists : as the social history of young America has ever been progressive in luxury, which no money panic or revulsion in trade has ever yet been able to check. 'Tis true that the rich grandfather is not often blessed with industrious, thriving grandchildren, but those who have at length got rich by catering for the wealthy, now take wealth's place and do its pageant drudgery. Thus industry in turn changes places with luxurious ease, which it improves upon, as if to convince the world that it has outgrown its plebian origin. But reader, if I mistake not, New York contains within itself a great and growing conservative power in its mechanical industry, physically great, and mentally improving, which is one day to modify that sickly form of society which opulent ease and pretension is ever prone to engender. Thirty years ago it was no satisfaction to spend time talking with a master mechanic in the city of New York, but now, within the last short month, I have had to admire the general information, the varied learning, modest bearing, superior tact, science, skill and industry of some of the young mechanics of New York.

Free Trade in Corn.—M. B. Bateham, of the Ohio Cultivator, writing from England, adverts to the embarrassment of the farmers since the abrogation of the English Corn Laws. He says, wisely, that the landlords should lower their rents, and the government its taxes. But the traditionary farmer, on the contrary, looks to the government for the renewal of the tax on foreign corn, a consummation not likely to be accomplished. Mr. B. says that he has not found a single intelligent, *disinterested* person in England who believes that the people there can ever be brought back to eat taxed bread. This is encouraging to American agriculture. *Waterloo, N. Y., Oct.,* 1851.

THE CULTURE OF FLAX.

Messrs. Editors :—As but very little has been written in our agricultural journals about Flax, perhaps what follows may be properly inserted in your valuable paper.

That the cultivation of flax in Central New York is to become, within a few years, a prominent feature in our farming, I feel quite assured, and as there is but little known as to its culture in this country, I feel called upon to give to the public some conclusions which I have arrived at after some little experience in the growing of it. That we in this part of the country have a soil whose natural capacities are in every way sufficient to produce flax in perfection, I think will be proven in a very short time to the most hard of understanding. Even in the present state of flax manufacturing, we will always find a fair crop a paying one, and should the cottonizing of flax prove to be as practicable as we are now assured that it will, we may pick up the dollars from off our fields almost as easily as it ever has been done in California.

In order to grow good flax, it is quite necessary to have a good deep and mellow soil of moderate fertility. Now as there are a great many farmers in this good State of New York who do not know exactly how to produce such a condition of the soil, I will just state a manner by which they can turn most any of their old pastures or meadws into fine fields of flax ; also, how they can harvest it best.

As *early* in the fall previous to the spring when the flax is to be sown, as is convenient, the ground should be plowed about five inches deep, being careful to have every inch cut and turned, and to have every stone larger than a goose-egg picked up and carried off. This ground should remain so until *late* in the fall—the later the better—when it should be well harrowed and once more picked. In the spring as early as the ground is in condition to be worked, get on with the teams and plow it across the first furrows ; then it should be harrowed smooth and sown with one bushel of flax seed and again harrowed until it is very fine. When the crop is grown four or five inches in height, it is well to go through it and pull out all the large weeds. Nothing further need be done until it is fit to pull, or when the bolls are quite brown, when it should be pulled and laid in thin swathes. As soon as these swathes are dry, they should be rolled up in large bundles, bound loosely, and set up in Dutch shocks to dry more. These bundles can be taken into the barn and threshed with a flail at the farmer's convenience. If the threshing is performed carefully, the sheaves will remain in good shape and the flax straw unbroken.

Again, these threshed bundles should be taken to a smooth grass ground, and spread in thin swathes, say an inch thick. When the top of these swathes is so rotted that the shiors break out easily, they should be turned over and left until the other side is in the same condition, when it should be dried again, bound in large bundles, and stored. The turning can be readily done by running a smooth pole about ten feet in length under the top end of the flax and lifting it over. Ordinarily the drying can be effected in the swathes; but if the weather is wet and unfavorable, a person should be consulted who is acquainted with the manner of setting it up on its butts to dry.

On all heavy lands this cultivation will secure a fine crop of flax. On land that is infested with *wire worms, flax is particularly serviceable.* Flax likes, as do almost all other useful plants, a deep soil, but this depth should not be obtained at the expense of the surface fertility; so I recommend five or six inch furrows. W. R. Manley.—*Newport, N. Y.*, 1851.

AGRICULTURAL SCHOOLS

It is useless, perhaps, at this late day, to undertake to discuss the question of the utility of "Agricultural Schools." All that we can now do, is to stand and wonder that nothing has yet been done on this subject; or, if anything has been done, that it was not done sooner; or, that so little has been done. And yet our wonder must cease in some degree, when we consider the prevailing ignorance on the subject of scientific farming, and the character of the men whom we choose to make our laws.

1st. *Prevailing ignorance.* This begins to be dissipated, and yet it is no uncommon thing to hear some of our best farmers (at least in their own estimation) say they do not believe any man in his study can teach *them* how to manage their farm. Such a remark I heard not long since; and besides, many of those that read are only gradually enlightened and convinced, and their action is slow.

2nd. *The character of our law-makers.* How few of these are intelligent farmers! Perhaps not one-fourth! and yet we are a nation of farmers. So long then as we choose lawyers, merchants, politicians, stockholders, &c., who know nothing about farming, and even less, we cannot expect that the interests of farmers will be greatly consulted. Is it impertinent, then to ask, "Whose fault is it if the farming interest is left to take care of itself?" The majority of our voters are farmers and can control every election. If they will not consult their own interests, who will consult for them? The fault then belongs to the farmers themselves. Let them do their duty to themselves, by choosing men of the right class, and they will soon have such laws and institutions as they wish. H.—*Down East, Oct.*, 1851.

NOTES BY A FARMER

"The present generation is death on American Forests."—*Editor Genesee Farmer.*

"Why," says one, "do we hear so much about 'forests,' 'waste of timber,' &c. The earth has been inhabited several thousand years, and those parts that have been longest inhabited are not yet destitute of timber." The question is as easily answered as it is asked. No age of the world ever required so great a consumption, or made so great waste, of timber, as the present, and no country requires so great a consumption as ours; and that consumption must necessarily increase with the increase of population, unless a substitute for steam shall be found. But as I may perhaps treat of this subject hereafter, I omit further remarks.

A "Rat-Proof" Granary—One covered, or lined, with tin. At least cover every joint on the out-side, or on both sides, with a strip of tin. Rats will seldom try to make an opening, except where a crack or joint tempts them to the work.

Rats and Mice.—One of the best methods of destroying these pests, that I remember to have heard of, is the following: Take a large kettle, or barrel, fill it nearly full of anything that is most convenient, as waste grain, chaff, beans, earth, &c.; set it in the barn, or other place infested with rats, place a board for them to run up on, throw over the mass a quantity of meal and let them feed several nights without interruption. Now empty the vessel and fill it with water up to about six or eight inches of the top; throw over the surface a little chaff sufficient to cover it, and strew over this a little meal and arrange it as before. The rats will detect the trick when too late to profit by it. Scores have thus been taken in a single night.

Muck.—Quick lime will assist in the decomposition, if mixed with muck in the pile. From my limited knowledge on the subject, however, I would treat it differently. I would either put it into the barn-yard in the fall and let it be worked into the mass of winter manures; or I would spread it over the ground in the fall, harrow it about in the spring, sow on it some lime and plow it under. Muck will be of comparative little value on land already abounding in vegetable matter. Its value will be conspicuous on sands, clays, or, perhaps on any exhausted soils.

Suckering Corn.—This, according to my theory, should be done early, in order to throw the whole nourishment into the main stalk. H.—*Down East, Oct.*, 1851.

MOUNTAIN ASH

For the information of Mr. Thomas, (in answer to inquiries in the last Genesee Farmer,) I would state that some ten years ago (I think it was the last of November) I planted a handful of Mountain Ash berries without any preparation. I did not even pick them from the stem, but covered them with earth not to exceed an inch in depth, not thinking they would come up under a year and a half, but was agreeably disappointed when a little more than five months, or early in May following, they came up so thick that I was obliged to transplant them before there was hardly any root formed. This I did by breaking them apart into bunches of from four to a dozen (I could not do otherwise, they were so thick together) in a bunch. In a few days I removed or destroyed all except one or two of the most thrifty which grew so finely as to amply repay all the labor bestowed upon them. Cordelia Ann Reeves.—*Arcadia, N. Y., Oct.*, 1851.

Tobacco in Wisconsin.—It appears that the attempt to grow tobacco in Wisconsin has been successful. The *Watertown Chronicle* says: "The first experiments in Jefferson county at tobacco raising, have been made this season. In the towns of Milford, Waterloo, Aztalan and Lake Mills, some twenty acres have been cultivated. In every instance, we learn, the most complete success has attended these experiments. It has been demonstrated past a peradventure, that our soil and climate are peculiarly well adapted to the growth of this plant. And what is still more gratifying, the crop pays well. These twenty acres, we are assured, will yield an average net profit of $50 per acre."

Inquiries and Answers.

Messrs. Editors :—The frame barn of Mr. John Brush was burnt on Sabbath evening, August 31st, from an unknown cause, as there was no fire within reach, and no person near except the owner, who was within a few rods when the flames burst out through the roof and siding. The barn was crowded full of hay and grain ; the last had been put in the evening before, (it was oats,) and the night following was warm and sultry, sprinkling a little rain about daylight on the day of the fire. It cleared off in the morning and was clear and warm. About five o'clock the fire took place. The barn stood in a meadow.

Can you give any information, through your valuable paper, whether the hay, oats, or straw, would ignite. W. K. Fulton.—*Exchangeville, Pa., Sept.*, 1851.

This was doubtless an instance of what is denominated spontaneous combustion, the causes of which should be well understood by every farmer. Many a reader has seen a mow of hay, which was put up in too moist a condition, turned black—literally burnt—although never on fire. Under favorable circumstances, manure heaps not only generate heat and burn very slowly, but sometimes burst out into a blaze. Some, we dare say, have seen a bin of grain get wet, the grain sprout and evolve considerable heat. In all similar phenomena, the slow combustion arises from the chemical combination of atmospheric oxygen with carbon, and probably hydrogen, in the decomposing vegetable matter. The intensity of the chemical action is promoted in cases where hay in stacks and barns takes fire, by a variety of causes, prominent among which is the condensation of oxygen in the innumerable sponge-like cavities in the mass subject to decay. If it was thinly spread out, it would not burn.

Prevention.—Never put green or wet hay, grain, or cornstalks, in a compact heap.

Messrs. Editors :—I have been lately drawing, from a marshy hollow, a quantity of rich black muck. How should it be treated ? How applied ? If piled with barn-yard manure, should lime be mixed in ? Should lime ever be mixed with manure, or always applied alone ? Please answer these inquiries and oblige a subscriber. J. L. S.—*Whitestown, N. Y., Sept.*, 1851.

It would probably be better to mix lime with swamp muck in a heap without manure, and apply this compound separately. When muck is mixed with manure, it ought to be dry to absorb the urine from domestic animals, in which case ammonia enough is generated from urea and other nitrogenous matters in the dung, as well as urine, to neutralize all the acids in the muck. Lime may be applied to coarse, long manure, like that from straw and cornstalks, with advantage, but never to the excrements of animals, except as gypsum or a muriate.

Messrs. Editors :—I have been a reader of the Farmer for several years, with a good degree of satisfaction. I wish now to make one inquiry, that it may be answered through the columns of your valuable paper.

Suppose the soil to be removed from a piece of land to the depth of five feet, how long will it take to bring it to a good state of cultivation again ? and what is the best course to pursue in order to effect the object ? A Farmer.—*Adams Centre*, 1851.

Manure well, plow up the subsoil, sow peas, harrow thoroughly, and let the hogs eat the peas that grow, without harvesting. Apply a top dressing of lime, turn under the pea vines, and you may grow either grass or grain on the land, unless it is worse than an average of earth four feet below the surface.

Messrs. Editors :—I wish you would publish a request for some of the farmers of each of the different States to give the prices of cattle, sheep, horses, mules, and oxen, in their different localities. I think that a page of the Farmer devoted to a report of prices of this kind, once a year, would be of much use to the farmer. W. H. G.—*Hornby, N. Y.*, 1851.

Messrs. Editors :—You invite your readers to make any inquiries they wish, or give any information they can. I avail myself of this permission, to ask a question or two. I am now on the wrong side of fifty, am a mechanic, and am getting too old for the hard labor I have to undergo, and wish to live on my land, but it is a small lot of five acres of young fruit trees and six acres of arable land. How shall I go about it to make the six acres support me moderately, as the fruit is all young and for some years will not amount to much. I have tried some experiments to get large crops on a little land, and sometimes have failed ; for instance, I put in half a bushel of wheat, some years ago, in drills, eighteen inches apart in the drill ; I forked through it twice in the summer, top-dressed it well with hog dung, and it grew five and six feet high, but when I came to reap it, there was not a grain of wheat in the whole. Can you tell the reason of this ?—The ground had been trenched one foot and a half deep, when sown, and planted out with small plum trees. The year before last I tried it again, omitting the trenching, although I put it all in (that is the half bushel of wheat) with the spade, digging, or sowing or drilling, as I went along.—This I dug through twice during the summer, and it grew the finest, to look at, in the country—five to six feet high ; but when threshed, only produced two bushels. I should say that I gave this a top-dressing of bone dust. The land it was sown on is considered as good as any land about, as the young trees on it grow very finely. Now there is some reason for its failing to produce wheat. Can you, or any of your readers, solve the difficulty for me ?

Would it pay me to raise or fat cattle, on Mr. Mechi's plan, as stated in the January number. I can buy hay out of the meadow, in summer, for seven or eight dollars per ton, and out of the stack, in winter, for ten ; corn for 4s. 6d. per bushel ; and oil-cake for 12s. per 100 lbs. Will this pay so as to enable me to raise manure, without which I am certain I can raise no crop. Would spent tan, thrown under the hogs, fix the ammonia ? as I can get plenty of that. Will it pay to give 2½ to 3 cts. per lb. for guano ? What is the value of a bushel of hair from the tan yard, compared to a one horse load of twelve bushels of stable manure ? Will land well manured, and plowed eight inches deep, do as well as if subsoiled ? This, or any other information you can give, so as to enable me to maintain myself and family on a farm of six acres, will much oblige me. N. Chatfield.—*Canterbury, N. Y.*, 1851.

Messrs. Editors :—The enclosed is a sample of grain which I received with some marine plants, shells, &c., presents from a friend on Turks Island, labelled " Turks Island Corn." The stalk on which it grew resembled that of broom corn, the seed or corn growing upon the bush, and, judging from the quantity on the stalk which I received, must yield largely. I will plant what I have and report the result to you. Will you plant these, or give them to some one who will, and inform me of his success ? I would send you a larger quantity, but for the postage. Is not the agricultural interests of this great country sufficiently deserving of the favor of the government, to be entitled to the conveyance of seeds, grafts, &c., of limited weight, through the mail at low rates ? Can you not urge the friends of agriculture, through your widely circulated journal, to demand this of our government ? A. G. H.—*Waukesha, Wis.*, 1851.

We shall plant the seed.

Messrs. Editors :—Being a subscriber to your ably conducted and valuable paper, I feel at liberty to ask of you, or some of your western patrons, through its medium, some information relative to the habits of an animal called the Gopher, which abounds to a considerable extent in most parts of this State, particulary on bottom prairies, and the best mode of exterminating them. They being very numerous and troublesome on my place, I am extremely anxious to dispose of them in some way, and will feel under lasting obligations for the desired information. E. M. B.—*Albia, Iowa.*

Eds. Gen. Farmer :—Being a subscriber to your truly valuable paper, I take the liberty to trouble you with the following question, viz : Do you know any sure remedy for the disease known here as *gargit*, in cows ? Being a young man, and having lost the use of one cow by that disease, if you know any remedy it would be truly acceptable. Carlton Graves.—*Madison, O., Sept.*, 1851.

Will not some experienced stock-grower suggest a remedy for the malady above named, or give an account of the proper treatment ?

PREPARATION FOR WINTER.

MESSRS. EDITORS:—Having received so much benefit myself, by being reminded in the Genesee Farmer, occasionally, of the importance of preparing for winter, I may be pardoned for endeavoring to do to others the same kindness I have so freely received. I always intended, as of course others do, to be fully prepared for every emergency, as much as possible; but, somehow or other, always happened to be a *little behind*, and had to do work in very unpleasant weather, which with a little *forethought* might have been done easier and better a little before. Then, often on account of the unpleasantness of doing out-door work, many things remained entirely undone, and much loss was the consequence, and perhaps suffering to animals from cold and storm. One cold, stormy day in the winter of 1848–9, I sat by a warm fire, feeling rather uncomfortable as I thought of a barn that needed a little repairing, that I intended some time ago should have been done on the first fine day; but it had not been done, and the snow was covering my hay mow, and the barn looked like a snow palace inside—the stable that was not *quite* as tight as I knew it ought to be, and might very well have been. As I observed, I felt rather uncomfortable at these thoughts, and took up the Genesee Farmer to read a little and forget my bad feelings, when the first thing that attracted my attention was an article headed "*Prepare for Winter.*" I laid down the paper and really felt *cross* at being reproved in that way, and said something about its being very easy to write, but those that wrote such fine things didn't do any better than those of whom they were finding fault, with many more things of this character that I am not now foolish enough to repeat. But, after a time my good sense began to show me the truth of the matter, and in a little while I thought it was about right. In about an hour I had resolved to go to work at the stable at once, in spite of the wind and the snow. So I put on my thick coat and mittens, called the boys to my assistance, (who wondered what new streak had taken me,) got hammer and nails and boards, and fixed up the stable in pretty good order in about two or three hours. Next day went at the barn, repaired it in every place where repairs were needed, or where an improvement could be made, shoveled out the snow, and then sat down to enjoy my reading, feeling, I can assure you, more like a man than I had felt before in many a day, comfortable in body and mind. I have endeavored since to keep a little ahead of the times and seasons, and find great benefit from the practice. Now, brother farmers, if you profit by my example, it will add to your honor and happiness. H.

SELECT SOUND POTATOES FOR SEED.

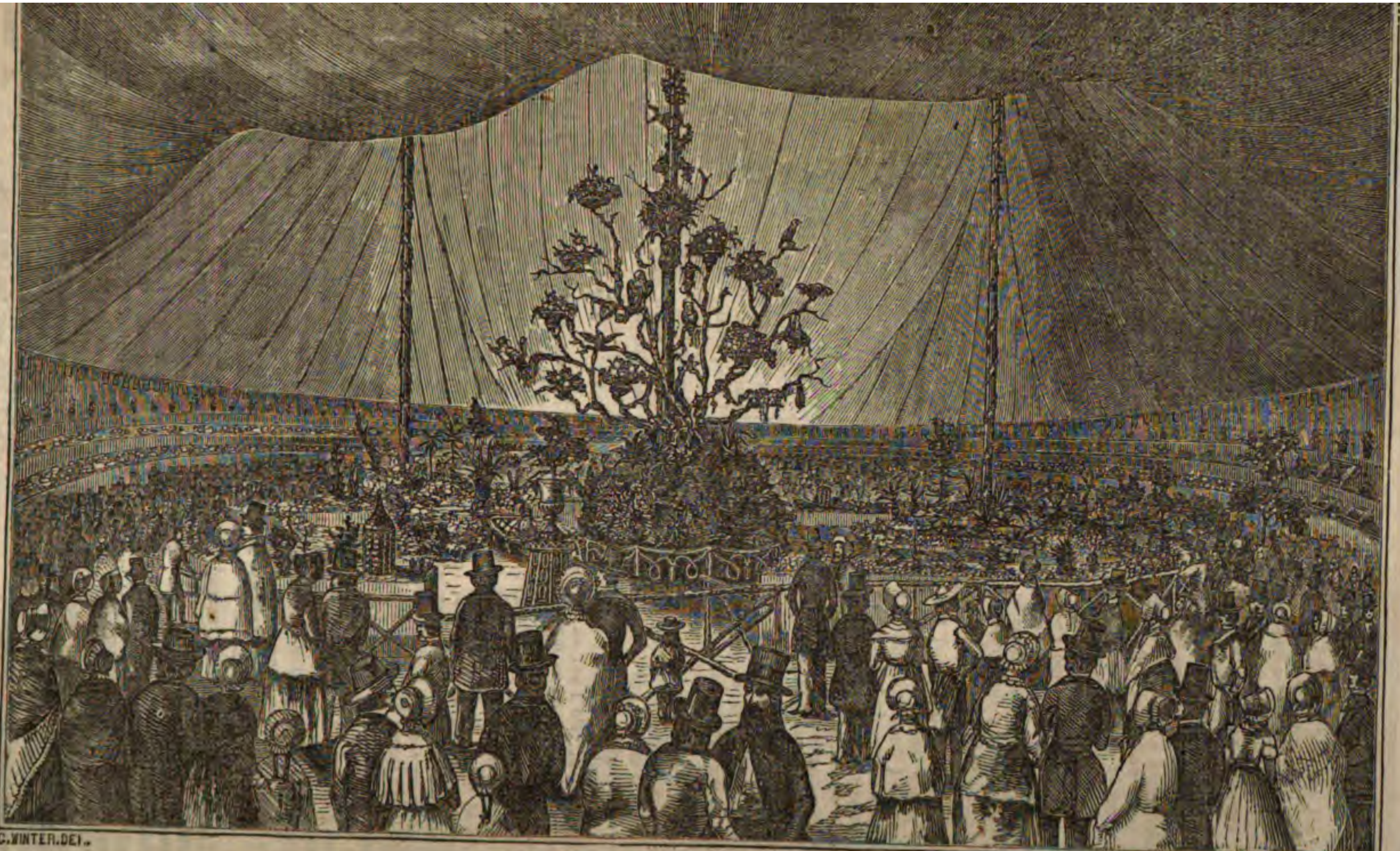
MESSRS. EDITORS:—For several years I noticed among my potato vines when hoeing, some hills of small sickly vines, and always observed that such vines died out prematurely and never yielded any tubers worth harvesting. When hoeing last summer, I noticed the same proportion of sickly vines and determined to search for the cause. On opening a hill I found that the seed potato had been deeply cut by the hoe, in digging the preceding fall. Not yet satisfied that this was the only cause of the dwarfish appearance of the vines, I continued the search, digging up every hill of sickly vines on a patch of half an acre. I found, to my surprise, that *in every instance* the seed potato had been cut with the hoe, or pricked with the potato hook, in digging, and the incisions thus made were covered with a black mildew, and premature decay had commenced. I therefore conclude that a *diseased* potato is unfit for seed.

Permit me to add a word on the cultivation of the potato generally, as I have been very successful in raising that useful plant for the last twenty years. I plant on a loamy soil, plow deep, and plant early and deep, by which the plants get an early and vigorous growth, and very seldom suffer with the drouth during the whole season. They also arrive at maturity early, in time to be harvested while the weather is fine, before the heavy fall rains set in, which I consider essential to their flavor and preservation through winter. I have noticed that some farmers let the potatoes and weeds grow together until the vines are large enough to be hilled up. This I consider bad economy, as the weeds rob the vines of moisture and nourishment, and require much more labor to subdue them than if taken in season. My practice is to go through them both ways with a one horse harrow, or cultivator, as soon after they come up as practicable, and then leave them without hoeing until the vines are large enough to receive a sufficient hill for the season. I then plow them out both ways and dress them with the hoe, which is all the care they need until ready to harvest. In harvesting, I dig them out of the ground and let them lie in the sun until the latter part of the day. The dirt will then mostly fall from them and leave them in fine order for use. I usually plant large potatoes and plant them whole. I have tried planting small potatoes, and also large ones cut in pieces, but I have uniformly found that they yielded less in quantity, and a greater proportion of small ones, than when I have planted large ones uncut. D.

SUB-SOILING FOR POTATOES.

MESSRS. EDITORS:—Last spring I broke up a piece of pasture for corn and potatoes; soil, sand and gravel—plowed seven inches deep. Through the center of the lot, I subsoiled a piece of land seven paces wide—subsoiled with the common plow: i. e. throwing the plow into the furrow and plowing five inches deeper than the bottom of the first. That raised the subsoil on the top of the first furrow, to the depth of three inches. I planted four rows of potatoes and three of corn on this subsoil. On one side corn was planted; on the other, potatoes and corn—the potatoes divided from the subsoiled ones by the three rows of corn. The corn when harvested was not as good—stalk small, and not well eared. The potatoes were large, on the subsoiled, and no rotten ones were dug; whereas, the others were diseased and many of them rotten. They were placed in separate piles in the cellar, and when assorted in the fall, one quarter of those planted on the sod were diseased or rotten; of the subsoiled, only two potatoes showed any indication of disease. The seed was the same, (round pink eye) planted the same day, the same care in cultivating, and dug at the same time.

I am not prepared to give any reasons for the difference, other than the dryness of the subsoil when laid on the surface. I plowed the land, not knowing or expecting that it would make any difference, but I shall give it a fair trial, as many others will who have seen the two crops. A. TODD, JR.



C. WINTER. DEL.

VIEW OF THE INTERIOR OF FLORAL HALL.

MILLER-MIX, SC.

Horticultural Department.

EDITED BY P. BARRY.

THE HORTICULTURAL DEPARTMENT OF THE STATE FAIR.

In our last we made a few general remarks on the arrangement and contents of Floral Hall. Now we are able to present a very correct and well executed drawing of the interior, by Mr. G. Winter, of this city. The tree in the center, the ranges of shelves and tables around the tent, with the baskets of fruit and various floral ornaments, the rock work around the base of the tree, the rustic fence enclosing it, the orange tree in a vase on a rustic pedestal opposite the entrance, and other conspicuous objects in all parts of the tent, are brought out as conspicuously as possible in so small a space. Among the spectators is one who will be readily recognized by those who reside in Rochester or vicinity. We refer to the gentleman with a long beard, whose back is turned towards the interior of the hall. This is a first rate *portrait*. The tree in the center of the hall, which in the main gives it character, was originally designed by Mr. David Watson, at present employed by Messrs. Ellwanger & Barry. He ought to have received due credit in our last, but was overlooked.

Coming to the details of the exhibition, we think we may safely say that in quantity as well as in quality it has never been surpassed in this country, and it would have been much better but for a few circumstances. In the first place, the Massachusetts and Pennsylvania Societies held their exhibitions at the same time, and of course deprived us of all the contributions of eastern fruit growers. In the second place, we had two weeks of excessively warm weather just before the show. This ripened fruit so rapidly and was so injurious to flowers, that both fruit and flower departments suffered much—the latter more especially.

There were about fifty contributors of fruits—half the number from Rochester and vicinity, and they by far the largest contributors. We were particularly interestsd in the display of pears, because it enabled us to mark the progress being made in New York in the culture of this fruit. There were several excellent contributions. John Morse, of Cayuga, had forty-three varieties, all *good* popular sorts, and specimens fine; Messrs. Bissell & Hooker, thirty-seven varieties, among which we noted some new ones; Col. B. Hodge, of Buffalo, twenty-three varieties; L. F. Allen, Esq., of Buffalo, ten varieties; Chas. Taintor, Esq., of Buffalo, fourteen varieties; A. H. Norris, of Stafford, eighteen varieties; Messrs. Thorp, Smith, Hanchett, & Co., of Syracuse, many varieties; Messrs. W. T. & E. Smith, of Geneva, nine varieties; Ellwanger & Barry, of Rochester, one hundred and six varieties, and a small tree of *Louise Bonne de Jersey* in a tub, loaded with fruit—a very attractive object. Among all the varieties presented, the *Bartlett*, *Louise Bonne de Jersey*, *Steven's Genesee*, *Seckel*, *White Doyenne*, *Duchesse d' Orleans*, and *Belle Lucrative*, were prominent, being not only remarkably abundant and fine, but brilliantly colored and attractive. There were also later varieties, such as *Dix*, *Beurre Bosc*, *Beurre Diel*, *Bonpock*, *Van Mons' Leon le Clerc*, *Vicar of Winkfield*, *Easter Beurre*, *Beurre Gris d' Hiver Nouveau*, and many other standard sorts shown in greater perfection than we have ever seen them before as to size and fairness. We are confident, from what we have seen on this occasion, that New York will soon stand at the head in pear culture. In a few years more, when our extensive orchards come into bearing, we will make such a display, on occasions of this kind, as has never been seen yet.

Among peaches we had some good collections, in all of which *Crawford's Early* occupied a prominent place. They were not only large and fine, but presented in baskets and large dishes piled up in all directions. Mr. David McKee, gardener to I. R. Murray, Esq., of Mount Morris, presented a large and beautiful collection, but generally without names. The late Mr. Murray, sen'r, was a great peach amateur, and had collected in the gardens at Mount Morris every valuable sort; but he is gone, and the names of many have been lost. Mr. John Donnellan, of Greece, had a fine collection of sixteen varieties — superb specimens. Mrs. W. R. Smith, of Macedon, fifteen varieties, but specimens rather inferior. Mrs. S. also presented eighteen glass jars of nicely preserved fruits, (without sugar, alcohol, or vinegar,) a very interesting contribution. Mr. L. Fay, of Chautauque presented a good collection. The chief novelties in the peach way were some good seedlings from Mr. James Lyon, of Irondequoit; they will no doubt prove valuable.

Plums were scarce. The most interesting collection was from E. Dorr, of Albany, though the specimens were small — twenty-four varieties, including "fourteen *Scuyler Gages* for premium." James Buchan, of Rochester, exhibited twelve varieties; Ellwanger & Barby, eighteen varieties; and S. H. Ainsworth, of Bloomfield, fine *Jeffersons*.

Of grapes there were a few fine contributions.—R. L. Colt, Esq., of Patterson, brought a fine collection of foreign varieties from his extensive vineries, and this was the most important contribution from abroad. H. L. Suydam, Esq., of Geneva, exhibited from his vinery beautiful bunches of *St, Peters*, *Bluck Hamburgh*, *Zinfindal*, and *Black Prince*. These were the first crop, the vines having been planted a year ago last spring. Mr. S. has promised us soon an account of the construction and management of his vinery. Messrs. Bissell & Hooker presented half a dozen varieties from their vinery. The specimens were all, and especially the *Black Hamburgh*, very fine. Dr. J. A. Warder, of Cincinnati, editor of the Horticultural Review, exhibited *Catawbas* and *Herbemont's Madeira*, besides samples of Ohio wines. The latter we understood were thoroughly tested, and produced a most *lively sensation*. We hope the next time the Doctor brings us samples of Buckeye wine, the bottles will not be quite so large.

Of apples there was, as usual, an immense display. Winter varieties were of course green and unattractive, but, for the season of the year, they were fine far beyond our expectations. N. Hayward, of Brighton, had forty varieties—pretty good for a farmer; John J. Thomas, of Macedon, a fine collection of sixty-three varieties; Col. Hodge, of Buffalo, thirty-nine varieties; W. T. & E. Smith, of Geneva, thirty-six varietes; David Hamilton, of Clay, Onondaga Co., thirty-two varieties; Bissell & Hooker, twenty-three varieties; H. Hooker, twenty-three varieties; James H. Watts, a superb dish of *Spy* from Mendon—the premium dish; Ellwanger & Barry, eighty-six varieties; Chas. Powis of Greece, John Donnellan, Messrs. Ryan & Co., and many others, choice collections. Among all these, we noted nothing remarkable in the way of new varieties. The *Gravenstein*, *Porter*, *Pomme Royal*, *St. Lawrence*, *Drap d' Or*, *Hawley*, *Maiden's Blush*, *Hawthorden*, and *Duchess of Rosenburg*, were the principal varieties in eating condition, and the first was, in our opinion, the best apple in the tent.

In the floral department, Dahlias were the leading feature. Immense quantities were shown, but few were really good. The dry, hot weather for a week or two before the Fair, had a disastrous influence on them. The same cause operated against Roses and consequently few were seen. Verbenas were abundant. Mr. Wm. Webb, of Buffalo, had a very choice collection and nicely shown in moss. Miss Laura J. Whitney and Mrs. Geo. J. Whitney exhibited a large collection in a very tasteful manner. Ellwanger & Barry had a fine collection of Phloxes and some large specimens of *Salvia Splendens Major*, one of the most brilliant autumnal flowering plants. Its long feathery spikes of bright scarlet flowers attracted every eye, whilst a multitude of rare and less showy things wholly escaped notice. So it is in the world after, as well as at, the Fair.

Vegetable Department.—This occupied a circular tent in rear of Floral Hall, with a passage between. The display here was better than we have ever seen it before. Mr. Robert Donnellan, of Greece, superintended the arrangement. Mr. John Gray, of Chili, had on his table tomatoes that weighed upwards of 13 lbs. each. Squashes grown since 13th of July that measured 6 ft. 7 in. by 6 ft. 6 in. *Quintol* Cabbages that weighed 30 lbs. Fine green nutmeg melons, white carrots, and ash-leaved kidney potatoes. Mr. Gray had the latter in market on the 19th of June. Mr. John Donnellan made his usual rich display.—Ten great squashes, enough to load a waggon; five varieties of onions, beautiful samples; *Quintol* and *Green Savoy* cabbage; summer and winter squashes; water melons; and a great collection of fine garden productions. Theodore Backus a fine collection, among which we noticed some fine curled parsley — a fine, neglected thing. C. F. Crossman, H. Mulholland, N. Hayward, general collections of well grown things. James Buchan, Esq., by his gardener, immense squashes and cabbages, besides fine carrots, beets and potatoes. Mr. Isaac J. Collins, of Gates, made an interesting display of sixteen varieties of potatoes; and good samples of sweet potatoes were shown by R. S. Stevens, of Attica. Alfred Hale, of Lyons, "wild Mexican potatoes," a fine looking, long, white sort. Fine samples of Lima Beans were shown by J. D. Colt, of Irondequoit, Messrs. J. W. Seward and M. G. Warner, of Rochester. We are glad to see this richest of all beans receiving some attention.—Mr. Seward has been the first to encourage their culture here. A novel and very interesting contribution was made by Messrs. Charlwood & Cummings, of London, of 144 different varieties of Field and Garden Seeds, all the samples of the finest quality. They were examined by both farmers and gardeners with much interest, and at the close of the exhibition were sent to the Society's Museum, at Albany. A silver medal was very justly awarded them.

We would, if space permitted us, be glad to make a more minute notice of the various articles presented in all the departments, but we are compelled to pass by many things well worthy of notice and perhaps more so than some we have mentioned.

We would, also, be glad, if circumstances permitted, to speak of committees and their reports, but this we shall do at another time. The subject has an important bearing on the influence which these great annual displays may or may not have in improving the system of cultivation and fixing attention on meritorious objects.

GATHERING SUMMER AND AUTUMN PEARS.

We have good reasons for believing that but a small portion of those who cultivate pears know when to gather them. The general practice is to allow them to remain on the tree until, by a change of color, they show undoubted signs of ripening. This would strike most people as being, naturally, very proper. Why, it is asked, pick pears *green*, more than any other fruit? We are not able, at this time, to give a satisfactory explanation of the fact, but a fact it is, that when summer or autumn fruits are allowed to remain on the tree till the ripening process has commenced, they loose their fine flavor and become either pasty, mealy, or insipid, and worthless. We know of few exceptions to this, although some ripen better on the tree than others. It would appear that while the fruit remains in connection with the tree, its juices and delicate perfumes that constitute what we call flavor, pass off into the atmosphere and back into the tree, or that the maturation of the *seed*, which is the grand object of the fruit, exhausted all its finer properties, but that when the fruit is taken from the tree as soon as its growth is completed, the juices and perfumes instead of being evaporated into the atmosphere, diluted with watery juice, returned into the tree, or appropriated by the ripening seeds, is *concentrated* in the pulp or flesh, and by maturing there, bring out the full perfection of the fruit. When a fruit has attained its growth, all the subsequent changes that it undergoes, in attaining what is termed ripeness, are of a *chemical* nature, and it certainly appears that this chemical process is much better performed in the fruit room than on the tree in the open air. This much, at least, we have learned by experience. But it is asked, "if pears must be picked before ripe, and even before they exhibit symptoms of ripening in their complexion, how are we to know exactly when to pick?" This is a most difficult point indeed to the inexperienced cultivator, and one on which it is exceedingly difficult, nay impossible, to lay down long rules that would admit of general application.

Seasons vary in *one* locality from a week to a fortnight, and the variety that might one season be gathered on the first of August, will not in another be fit to be picked before the middle of the month.—A week of difference, as to the season, sometimes exists between two sections of the same garden composed of different soils, and besides these, the kind of stock, vigor of trees, &c., &c., hasten or retard, as the case may be, the ripening of fruits. We have had this present season some trees of *Bartlett* that ripened their fruits early in September, whilst others in the same grounds, but in a cooler and more damp soil, were nearly a month later. Hence we cannot say, even for one locality, pick such and such a variety on any given day of the month. We can only say that summer and autumn pears should be picked as soon as they have fully and fairly completed their growth. By familiarity with the fruits, we can tell at a glance when this takes place, and nothing short of familiarity can enable us to judge correctly on this point. Different varieties assume different hues and colors, and some remain quite green till ripe. But even the same variety varies greatly on different soils, and in different seasons, and on different stocks, and trees of different degrees of vigor. As an instance, we may quote the *Summer Francreal.* Last season we had a dwarf tree that bore a great crop and every specimen was highly colored when ripe, clear yellow with a red cheek. On standard trees, the same season, the same variety remained quite green till fully ripe. This season we had none that showed any color, even when dropping with ripeness. There is, perhaps, in all varieties a tendency to change color more or less, if no more than a different shade of green. This may be imperceptible to a careless observer, but to those who watch their fruits closely, it will generally indicate that period when growth ceases and maturity commences. This is the period to be watched for in gathering summer pears. Let them be taken then and laid on a shelf in a room where the temperature is moderate, and the light somewhat subdued, and the finest qualities of the fruit vill be brought out. The period at which a variety sually attains its growth in any given locality, in rdinary seasons, being known, and the earliness or teness of the season being taken into account, to- ether with the size and color of the fruit, will give pretty correct guide. Most varieties, too, when ey begin to mature, will, if taken by the stalk and fted *upwards*, part somewhat freely from the branch spur, but we find that this cannot always be relied , for some will adhere with great tenacity until ter the time they should be picked.

We feel it necessary to be somewhat minute on this bject, on account of the great lack of correct know- ge on the subject among a large portion of cultitors, and several circumstances have brought the ject very forcibly to our attention the present year. Our *Duchess d' Orleans,* a pear of which we ex- ted much from its great reputation, bore last sea- , and as it was new to us, we allowed it to remain the tree till nearly ripe. The consequence was, as insipid, and we felt disappointed with it. This r we watched it and gathered it early, and it has ed fine—first rate. This season we had a new ety, *Colmar Von Mons,* bear. Several young s bore a prodigious crop, and along in the month August, near the latter end, one was broken n and they had not yet attained full size. We branch and fruit and all on the table in the office, re it remained two or three weeks, when they ripened and were buttery and fine flavored, nearly as good as those gathered a month later and better than some that were left on the tree until they were evidently ripening. We have *Louise Bonne de Jersey, Bartlett,* and *White Doyenne,* and others that fell from accident before fully grown, and yet they attained their highest perfection in the house. A great many people are so pleased to have their trees bear, that they leave their fruit on as long as it will hang; they then expect it to be as fine as reported, but never fail to be disappointed.

There is yet another point in the management of these fruits nearly as important as the picking at the right season, and that is *eating* in the right season. As in gathering, so in eating, we must not wait until the pear becomes yellow or natural looking. Many pears do not, as we have already said, become yellow at all. They ripen off in great variety of color—some dark green, some light green, some yellow, some orange, some brown, and so on. The principal guide in this matter must be the touch. As a general thing, a pear is fit to eat when the pressure of the finger leaves an impression on the surface, some, however, bearing to be much softer than others. The *Bartlett,* for instance, may be safely allowed to become quite yellow and soft to the touch, whilst very few of those that precede it would be eatable if so far advanced. Buttery or melting pears may be allowed to become much softer than half melting or breaking pears, for when a breaking pear becomes soft to the touch, it is generally worthless.

A great advantage in gathering pears early is, that they last much longer, to say nothing of their safety from birds and other depredators. When picked and put away in the fruit room, they should be examined daily and those that ripen first be used. Those that were most exposed on the outside of the tree, and ends of branches, will ripen from one to three weeks before others less favored. Some varieties require much longer to ripen in the house than others, and with new varieties, or those we are not familiar with, great watchfulness is necessary. We have this moment a case in point. A few days ago we picked a fine specimen of the *St. Andre* which has borne this season for the first time. We expected, from its appearance, that at least two weeks would be necessary at this season to ripen it, but we happened accidentally to take it up and felt that it was soft, and on cutting it we found it exactly right—two days more and it would have been "gone."—In feeling if a pear be ripe, the place to press is about the stem, as there it begins to soften first and pressure there is less injurious than elsewhere.

There is a great deal to be said on this subject if we only had the experience and leisure to say it to advantage. We shall return to it again; meanwhile we should be glad to hear from our correspondents, some of whom no doubt can give valuable hints, from experience, on this and kindred topics.

* * *

FLOWERS IN WINTER.—Last year one of my little girls took an old tin milk pan, filled it with earth, and set it full of garden violets which flowered all winter. This fall I have taken another, (I would prefer a deeper vessel,) perforated it with holes, set up a stalk in the centre, and surrounded it with young violets that have just begun to blossom, and already I have quite a handsome little flower-garden. The lovers of violets will be well paid by a similar arrangement. H.—*Down East,* 1851.

VAGUENESS OF PREMIUM LISTS.

There was a case came up at our late exhibition that seems to call for a remark or two. On the list of premiums for fruits was one offered for "the best basket of standard fruits, silver medal," and for this medal there were two competitors; one presented *a dish of fine winter Northern Spy apples*; another presented a fine rustic basket filled with ripe fruits, such as *Bartlett*, *Louise Bonne de Jersey*, *Stevens Genesee*, *Seckel*, *Belle Lucrative*, and other first rate pears; *Pomme Royal*, *Porter*, *Gravenstein*, and *Hawley* apples; *Jefferson*, *Imperial*, *Gage*, and other choice plums, besides the best peaches of the season. No committee could have hesitated in awarding the premium to this, if a variety of standard fruits had been required; but it appears they understood that apples alone were called for, and so awarded the medal to the *Northern Spy*. This is a favorite fruit of ours, and we rejoice of course to see so high a compliment paid to its high deserts, but we think hereafter such matters should be set forth so clearly that misconceptions of their nature would be impossible. If apples are desired, the premium list should read *apples*, for "fruits," we take it, does not mean apples any more than it does figs or grapes.

* * *

Northern Apples.—We are indebted to Jno. W. Bailey, Esq., of Plattsburgh, N. Y., for a box of apples containing the following varieties:

Bailcy Spice—noticed some time ago in the Horticulturist—a very good apple; so much like the *Pomme Royal*, or *Dyer*, in form, color, flavor, growth of shoots, &c., as to leave little doubt on our mind of their identity.

Late Wine—a very distinct looking fruit of good quality; conical in form, lightly tinged with red in the shade, and deep purplish crimson in the sun—tender and juicy.

Sailly Autumn—a very pretty, conical fruit; pale green in the shade, and dark crimson in the sun; rather dry, resmbling the *Black Giliflower* in texture. Mr. B. says it is probably a French variety, as it was brought from Montreal fifty years ago. *Sailly Sweet*, *Champlain*, and *Walworth*, are fair looking apples, of medium quality—all of which appear new to us.

* * *

Autumn Fruits.—We have never seen a finer display of pears than it was our good fortune to see the past week. One of the dealers had in his basket, exposed for sale, at the same time, most splendid specimens of *Steven's Genesee*, *Seckel*, *Vergalieu*, and *Louise Bonne de Jersey*, all well grown of uncommon size and beauty of coloring. We would defy the world to produce superior ones, in every particular, including richness and flavor; and to climax all, the *Oswego Beurre*, now in eating, we find, if possible, excelling all the above named. What a collection of choice fruit, and to be had of our own growing in this favored clime.

Of Fall Peaches, the *Druid Hill* is a superior kind introduced from Maryland, and grown by John J. Thomas, of Macedon; and the *Wine* variety grown by Ellwanger & Barry, full of juice, which gives it a character known in France as a champagne or "wine" peach. We advise all amateurs to procure the trees of both kinds. J. H. Watts.—*Rochester, N. Y., Oct.*, 1851.

KEEPING WINTER PEARS.

We are requested by several correspondents to give some directions for keeping and ripening winter pears. We will state our own practice.

We pick them all here about the 10th of October; lay them on a dry shelf in a dry, cool cellar, or room, for a week, until all surplus moisture has evaporated. We then wrap them up in dry, soft paper and put them in clean boxes or barrels, where they remain until the season of use. Each variety is kept separately. Some will require to be used in November, for instance *Winter Nellis* and *Bergamot Cadette*—*Vicar of Winkfield*, in December; *Beurre d' Arrenberg*, later; and *Easter Beurre*, in April. Keeping watch of these things, the ripest are taken first and brought into a warm room, a temperature of 60° or 70°, when they mature fully in a week or two weeks, according to the sort. Some will ripen, like the *Vicar of Winkfield*, almost perfectly in the cellar, requiring only a few days in a higher temperature; whilst *Easter Beurre* will require two weeks or more. *Princess St. Jermain* may be barreled, like apples, and if well grown will require very little ripening in a warm room; *Beurre d' Arrembergs* also. We have more winter pears to experiment upon this season than ever before, and we hope to gain some additional experience on this important subject.

* * *

Peaches in Minnesota.—We take the following article from the Minnesota Democrat. The editor appears confident that peaches can be grown in Minnesota.

> Peaches have been cultivated with success at Dubuque; and we learn from our friend W. H. Warren, trees planted by his father at Lapoint, on Lake Superior, fruited and survived a number of years. This tree is also successfully raised in the open air, in Sweden. In Russia they train the peach tree on a trellis, a frame horizontal and near the ground, which during the winter is protected from the intense cold by a thick covering of mats, and a thick coat of earth. In this way the horticulturists of Russia succeed in raising excellent fruit.
>
> There is not the least doubt that the apple, pear, cherry, quince, and all the berry tribe, will succeed admirably in Minnesota, but it is very generally supposed that the severity of our winters will destroy the peach tree. We are by no means disposed to yield assent to this opinion, and thereby abandon the sanguine hope of having the delicious peach among the farm and garden fruits of our beautiful territory. We have no doubt but a hardy variety of this tree may be found, that will stand our severest winters. We are in search of that particular kind, and ask the aid of friends.—This article is marked to a number of cotemporaries in this latitude, who are requested to inform us whether the cultivation of the peach has been tried in their respective neighborhoods, and if so with what success. And also whether trees can be supplied, and at what price.

* * *

Answers to Correspondents.—(S. Y. Campbell, Union.) *Grapes.*—We cannot this month attend to your request, but will as soon as possible. *Annual Flowers.*—Seeds can be forwarded in the winter. *Salvias Cupheas* and *Zauchsnerias* we usually propagate from cuttings in the spring—seldom get seeds.

* * *

Several articles prepared for this number, are of necessity laid over till next month. After the enlargement of our paper, we shall be able to do our readers better service.

* * *

It is said that there is a plant, growing in the hot springs in Iceland, which not only flowers but bears seeds in water hot enough to boil an egg.

Youths' Department.

HAMPTON COURT.

We continue our sketches from memoranda taken while in Europe, for the amusement and instruction of our youthful readers.

Hampton court, at this time, is one of the most interesting and instructive places in the neighborhood of London to which the public have free access. It is among the first places to which the sight-seeing stranger directs his steps, and is the holiday resort of thousands and tens of thousands of the tradesmen and artisans of the great metropolis. Nowhere in England, except in the great exhibition, did we see such an indiscriminate meeting and mingling of the various classes of society. We spent a whole day there, from early morning till late in the evening, and during that time we could not estimate within thousands the number of people that arrived and departed. An immense train of cars would empty out a prodigious load of passengers every half hour; boats would arrive every hour or two, and discharge thousands of passengers; omnibusses and private conveyances without number, also. From every avenue leading to it, strangers from every country in the world, and Englishmen from every part of England, town and country, poured in to see Hampton Court and its world-renowned beauties and curiosities.

We took the South-western Railway at the Waterloo station, passing through Vauxhall, Clapham Common, Wimbleton, Malden, and Kingston. The distance this way is fifteen miles and the fare about twenty-five cents. The villages are all pretty, quiet, and old fashioned—ivy walls, moss covered tile roofs, and everything just the reverse of what one sees in the villages that we find in the vicinity of New York, or any other American city. The country is quite level, and nearly all the way is devoted to market-gardening and orchards. Here we can see acres, and even tens of acres, of a single article; and some hundred of men, women, and even children, at work in one field. After a ride like this we begin to understand where the immense supplies of vegetables come from that supply the markets of London.

Hampton is a small vilage, and rather pretty, without being really beautiful as we had pictured it. At this time the inhabitants are doing their best to make something of the unusual influx of visitors. Almost every house has a hotel or restaurant, and we have not set our foot firmly on its streets till we are deafened with bells and all manner of invitations to partake of the creature comforts prepared for us—"It will take you a long time, sir, to see Hampton Court, and you need some refreshments before you go there." The English people know how to make cheap excursions; they carry their refreshments along, and it is a good plan, as was proved to us in Hampton by a very bad and very dear dinner.

But what shall we say of the Palace? It was originally founded by Cardinal Wolsey about the year 1815, and is to this day looked upon as his monument. The history of its rise and progress brings before us many of the most remarkable personages and stirring events in English history, Cardinal Wolsey, Henry the VIII., Queon Elizabeth, Cromwell, Anne Boleyn, Queen Mary, &c., are names all interwoven with the history of this great edifice, and familiar to all the readers of English history. What a train of thought is awakened as we first approach its gates! Then when we enter and pass around the magnificent halls where these venerable characters held their brilliant levees and banquets, and examine the costly luxuries they had assembled around them, the vast collection of exquisite works of art, on which the most eminent artists the world has ever produced, had expended years of thought and labor; the portraits that represent the forms and features of these distinguished persons, their costumes, arms, &c., we have enough for weeks of contemplation, and if we should undertake to write out the thoughts and feelings suggested, it is difficult to say where we should end. The "Guide to Hampton Court" shows that there are over 1000 pieces of painting, &c., the work of some 260 artists whose names and birth places are given.

There are great lessons to be learned here, both in morals and art, and it is well that it is now so liberally thrown open and converted, as it were, into a great public school. We can enter upon no details, for we would neither know where to begin nor where to end. Passing from the castle to the gardens and the grounds, we breathe freer. We are relieved from the deep and solemn thoughts that cannot be escaped in the midst of ancient portraits and objects that look down upon us from every wall, and window, and speaking of the past. We are among the majestic old trees; we have the noble avenues, the green lawn, gay borders of flowers, and gushing fountains before us, and, we are moreover in the midst of a happy, chattering crowd of people, moving around in groups, venting their admiration on this or that as their particular fancies dictate.

A GARDEN SCENE AT HAMPTON COURT.

The gardens and parks were originally laid out in the old French or Dutch style—straight avenues and walks, regular planting, and trees and shrubs pruned into all manner of fantastic forms. Shearing of trees is now abandoned—they are everywhere left to themselves; and the long avenues of majestic Lindens and Chestnuts are perhaps as fine as any in the world. The centre avenue in the gardens, which is represented in the annexed figure, is probably one of the most beautiful objects within the domain—at least so it appeared to me. It is very wide, and extends a great distance. The walk is as smooth as marble, and on either side are Yews and Hollies that must have been among the first trees planted. At one time they were all clipped and shorn into various forms, but for many years they have been allowed to take nature's form. Some of them are of great size. One, we observed, covered an area not less than forty feet in diameter. Some are completely covered with ivy, and many are in a decaying condition. The grounds are kept well. We had no where met with finer masses of flowering plants around the borders. Roses were profusely planted.

The Great Grape Vine is one of the lions of the place, and nobody thinks of going away until he has seen it. On our way to it we pass through the "Private Garden." Large Orange trees are the most remarkable objects. There are a couple of small green-houses, and a few rare plants called the remains of Queen Mary's collection. The great *Black Hamburg* Grape Vine is specially exhibited by the gardener, who receives a small fee from visitors. The house is seventy-two feet long and thirty wide on the rafters, and this vine covers every inch of the roof and is loaded in every part with large perfect bunches of fruit. It has produced as much as 2,500 bunches. It is planted outside of the house at one corner, and is carried in through the wall. It has no border of any kind, but appears to be growing under the walks, and the gardener says it has received no manures, or dressing of any kind, for many years. The stem at about three feet from the ground is about thirty inches in circumference, and the entire length about 120 feet. It is truly an amazing production of this kind. There is the *maze* and *wilderness*, too, that afford much amusement to those who seek for that.

Ladies' Department.

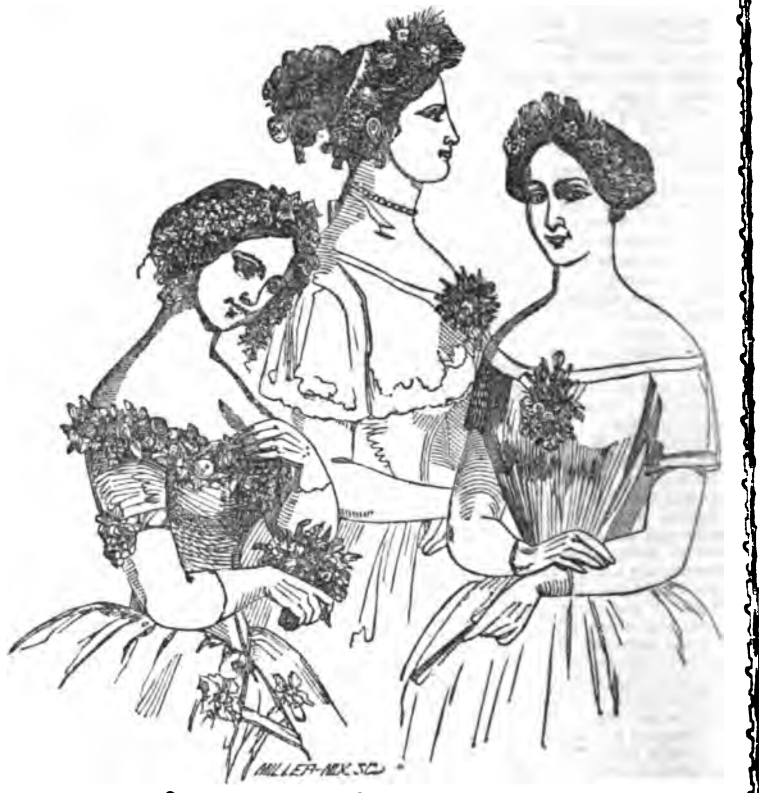
FLORICULTURE OF THE TOILET.

The Magazines are giving the ladies every month a *Fashion Plate*, and we see no good reason why we should not occasionally give *our Fashion Plate*. So we commence with the *Floral Fashions*. The floriculture of the toilet embraces the choice culture and general knowledge of all those plants which are susceptible of ornamenting the human form. As our fashions, to be acceptable, must be from European models, in this respect we are up to the times, as we copy the accompanying engraving and description from the *London* Magazine of Botany, for which it is translated from *La Belgique Horticole:*

"One of the favorite amusements of infancy is to plait crowns with the wild flowers of the woods and fields. The timid lover expresses his passion by the homage of a boquet; and the young belle naively abandons to her favorite the flowers which decked her brow or withered on her bosom. Old age itself smiles on flowers.—Crowns and other garlands may be traced to the most remote antiquity. Among the Greeks and Romans the crown was, so to speak, the ordinary hair-dress of the great philosophers. Socrates had always his head encircled with flowers. Alcibiades changed his crown three times a day. At eighty years Anacreon mixed roses with his white hairs. Cæsar, who was bald at thirty years, was indebted for a long time to the crown of flowers to conceal this defect from the beauties of Rome. At Athens as at Rome, no one could present himself in public without his crown.

At the present day there is an evident inclination to return to the better customs of Greece and Rome. Let us hope that in a short time the crown and the boquet will be rigorously enforced in every reunion which has pleasure for its object.—Why should not our ladies abandon the ungraceful cap for the elegant and odoriferous crown of flowers?

In order to render this part of horticulture directly realizable, we shall pass on to the descriptions of head-dress in fashion, the first since 1847; the second during the present year 1851; and the third, with some exceptions, at intermittent periods.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3. 1. 2.

1. *Coiffure a la Flore* (Head-dress of Flowers).—This is suitable for those persons whose proportions and forms are of the most perfect character, and which come nearest the Grecian type. The profile especially must be one of those which are commonly found represented on ancient *bas reliefs*. This head-dress is worn with the hair arranged in graceful wavy locks, the back being tied in a bunch, merely with a narrow band, and the ends floating down. The crown of flowers does not in this case form a diadem, but is tied in a knot behind, and at the lowest part of the head, from which point it gradually enlarges till it reaches the front, or the point immediately above the brow. This form of crown is composed of high-colored flowers, as the Rose, Narcissus, Hyacinth, Camellia, Carnation, and sometimes an Orchid, and it is bordered with Ericas and distichous Cypress, terminating in leaves, with the more slender or fine parts of branches of flowers which take an upright, and, at the same time, a nodding form. The ancient ear-rings, and the string of pearls around the neck, harmonize admirably with this head-dress, which, invented more than a thousand years, is not the less handsome and in keeping with good taste. The figure (1) represents this form of head-dress taken from the *Flore de Canova.*

2. *Coiffure a la Ceres* (Head-dress of Cereals).—"This kind of head-dress," says M. Lachaume, "is worn with either even or wavy locks. It is very graceful, but only suitable for those ladies who have the head well proportioned. It should always be made in the form of a diadem in front, from the top of the brow. It is best formed (plaited) of the small flowers of Roses, or of Camelias, mixed with Violets, Pinks, &c. The Erica, or any very light foliage, is indispensable." We shall only add that nothing can be more graceful or appropriate than one or two spikes of Hordeum Zeocriton, H. hexastichon, Triticum monococcum, and other ornamental grains. They are used dry for this purpose, and decorated by means of gum with gold or silver in leaf.—Ladies make elegant boquets of these cereals, which last throughout the winter. Cereals for head-dresses should be sown in spring, and the golden-yellow spikes, when matured, have a charming effect among the flowers which have been already named. In winter the forced flowers of Pyrus japonica, as well as the Cœlestina, will be found very serviceable.

3. *Coiffure a la Pomone* (Head-dress of Fruit).—This form is chiefly suitable for those who have a large and robust figure, and a healthy high-colored complexion. The crown is large, formed of fruits and leaves of the most select sorts.—The top of the corset is also furnished with a garland formed in a similar manner. This style of ornament has many resources, which are much ignored by *artistes*. The pretty red berries of Ardisia crenulata have a fine effect, resembling bunches of coral beads, and which may be obtained during the whole winter in our stores. The short-fruited spikes of Chamærops humilis, are equally desirable, and may be as readily obtained. Many of the Common Thorn or Cratægus, also furnish abundant resources. The white berries of the Mistletoe (Viscum album) with their leathery leaves, which do not soon fade, are excellent for this purpose, as well as the pearly berries of Rhipsalis. Besides many varieties of natural fruits, imitations in glass, especially small bunches of Grapes, are very effective.

Editor's Table.

"PREPARED GUANO."

We have occasionaly received complaints from farmers of having been deceived in the purchase of artificial manure, with requests that we should caution farmers of the danger of spending their money for a worthless article. This imposition we have much regretted, not only on account of the actual transfer of the earnings of honest industry from the pocket of the owner to that of the unprincipled speculator, but because it created a prejudice against prepared manures, which all cities can furnish the country, with great advantage to both. About the middle of August, Thomas Bennett, of Knowlesville, in this State, called at our office and exhibited a specimen of "*Prepared Guano,*" which he stated E. T. Kirkham, the former owner of his farm, had purchased in New York, from the use of which neither Mr. Kirkham, nor himself could find the slightest benefit. To show the correctness of his statement, as to the purchase, &c., Mr. Bennett left with us the following bill:

New York, Oct. 24, 1850.

Mr. E. T. Kirkham, Knowlesville, Orleans co., N. Y.,

Bought of Kentish & Co., *No. 40 Peck Slip.*

242 *lbs. Prepared Guano, at 1 cent per lb.*	2 42
1 *Barrel at 25 cents,*	25
Cartage,	25
Rec'd Payment,	$2 92

Kentish & Co.

The only manufacturers of the Genuine "Prepared Guano" in the United States.

In the number following, (September,) we published the following article, intended as a caution to farmers, whose interests of course it is our duty to guard:

> Prepared Guano.—We would advise our readers to be very cautious in buying any of the nostrums for sale as "*Prepared Guano.*" They are generally got up for the purpose of emptying instead of filling the purses of farmers—and in this, appear to be quite successful. We have now before us a specimen, purchased at Peck Slip, New York, and for which E. T. Kirkham, of Knowlesville, in this State, paid $1 per hundred pounds, which we should judge would be about as valuable as coal ashes. It appears to be composed of the lime and refuse coke from gas works, and in a barrel there would hardly be found a trace of ammonia. The purchaser informs us that he has not perceived the slightest benefit from its use. We may analyse this article, and give its composition, and the names of those who are thus engaged in plundering the public.

This notice called forth the following not over courteous letter, which, at the author's request, we publish.

Peck Slip, New York, Sept. 22, 1851.

Gentlemen:—In the Genesse Farmer of this month, you have written and published a gross, outrageous, and scandalous libel against me, evidently with the view of injuring my character in the community, and of destroying my future prospects! Satan could not have exceeded it in malignity! As I know you not, and have never personally done you any wrong, it is natural to conclude you have either been handsomely *paid* for this piece of dirty work, or else it has been inserted to *befriend some one who deals in Imported Guano, or other* manure. That a vile combination, and disreputable conspiracy of such a nature, amongst *such* men, should exist, does not surprise me, because there are people in creation who would not hesitate, clandestinely, to commit any outrage, if it could be accomplished with impunity, in order to rid themselves of a serious competitor.

If there was a *shadow of truth* in what you state as *facts*, there would be some trifling excuse for such gratuitous, unmitigated scoundrelism; but it is, *throughout, an infamous falsehood!* My Prepared Guano does *not* contain an atom of anything from Gas Works, notwithstanding your coarse insinuations and assertions to the contrary; and although you affirm "there is no Ammonia in it," it contains *more* of that fertilizing substance than *any that is imported*, but it is *fixed* in the shape of nitrates, muriates, phosphates, and sulphates, and therefore *not volatile.* The "article you have before you" may be what you say it is, but then you or your conspirator associates have *procured it for the purpose.* If it be such a combination, *you know it never came from me!* The solitary barrel was probably purchased to give a *coloring* parent in your paragraph, proves that the *public* good alone was *not* your sole object. It has too much the air of the midnight robber who uses the bowie knife *at once*, that the dead may tell no tales. There is not a shadow of the ordinary decency or caution about it, observable among even the *black-mail men.*

You unhesitatingly tell the world that "I am engaged in plundering the public," which is a *lie!* No one can, with justice, accuse me of even the shadow of a dishonorable act, for gain or otherwise. If the success of my business depended on a *single* falsehood from me, it would *not have succeeded;* nor should I have the approbatory and extensive demand from all parts of the world, which I now enjoy in spite of the dirty malice of those whose interests induce them to oppose me, in the vile manner you have done.

My Prepared Guano *is what my Circular represents it to be, and nothing less.* On page 2, you will see the opinion, respecting its intrinsic utility, of Dr. J. H. Bayne, President of the Agricultural Society in Prince George's County, Md. He is a gentleman of the highest respectability, whose scientific knowledge is well known, and whose integrity and impartiality no one would question. I never saw him, and therefore have not even the pleasure of his acquaintance.—After reading what he in his candor has stated, you ought to be somewhat ashamed of your open and direct assassin-like attack on me.

I have many approbatory certificates from parties I have no personal knowledge of, except as purchasers and farmers of undoubted respectability. I detest imposition, as much as any one. Let any *competent man of integrity, really desirous of promoting the public welfare*, call at my office for a specimen of my Prepared Guano to analyse and publish, for the information of the community generally, and I will open any barrel he may select for this purpose. He will find that it not only contains *more* Phosphate and Ammonia than the *Imported*, but *every other* fertilizing principle that *all* kinds of vegetation require. As the Ammonia is *fixed*, and the absorbents constantly resaturate themselves from the soil and the atmosphere, it thus becomes a *permanent and durable fertilizer*, instead of a stimulus for one crop only, as is the case with the Imported Guano.

You will insert this, my answer, in your next publication, unless you really are what you seem to be.

Yours, respectfully, Charles A. Kentish.

All we have to say in reply is, that we have not the slightest pecuniary interest in the sale of imported guano, or any pepared manure. Neither have we any relative or particular friend, that we know of, that could in the least degree be affected by the business operations of Mr. K.—We have never received one cent for praise or censure. There is not money enough in New York city to purchase three lines in the editorial pages of the Genesee Farmer.—We labor for the agricultural interests of the country. Our columns are open, and we invite discussion on all subjects that affect this great interest. For ourselves, we stand ready to commend the good and condemn the evil, always endeavoring to give a *reason* for our opinion, and always giving those who differ from us the benefit of our pages.

As we intimated we should do, we have procured an analysis of this article. Not having our own apparatus in the city, we forwarded it to Professor Norton, the agricultural chemist of Yale College, and the analysis shows the correctness of our statement, that "*in a barrel there would hardly be found a trace of ammonia.*" The following is Professor Norton's statement:

Analytical Laboratory, Yale College,
New Haven, Conn., Oct. 7, 1851.

Messrs. Editors:—I enclose the analysis of a sample of *prepared guano* sent me by yourselves a few days since.—The mere inspection satisfied me that it was of no great value, and the analysis more than confirms my opinion.—The results are as follows:

Water,	4.35
Alumina and Phosphate of Lime,	7.82
Organic matter,	32.58
Insoluble matter,	26.05
Carbonate of Lime,	28.76
Magnesia, Alkalies, and loss,	0.43
	100.00

three-tenths of the whole are water, or matter insoluble in acid, or nothing more than water and sand. More than another three-tenths is organic matter; this contains scarcely a trace of ammonia or nitrogen in any form, being worth no more than common muck from a swamp. Thus we have six-tenths of the *guano* made up of a mixture that as a gift would not be worth carting for many of your fine soils.—Nearly another three-tenths is Carbonate of Lime, a valuable article it is true, but one which can be bought far more cheaply by the barrel, bushel, or ton, than as a guano. The remaining tenth contains a small quantity of phosphates, but not enough to make the mixture of much value.

I do not know who are the parties engaged in this manufacture, but they certainly should be widely exposed, for it is one of the most outrageous impositions I have ever known. Farmers should avoid everything of this nature unless it is certified to be equal to a copy of analysis shown. This stuff is not worth transporting any distance for your land.

I am Sirs, yours truly, John P. Norton.

It certainly would give us no pleasure to convict a person of systematically and designedly defrauding the public, and we shall be happy if it can be shown in any way that it is not so in this case. The article presented to us is just what we have described it to be, and Messrs. Bennett and Kirkham are practical farmers, who, we believe, have no more interest, either in the character of *Prepared* Guano, or the Imported, than every other farmer. We have ordered a friend in New York to purchase a barrel, and if on trial it proves to be as valuable as represented by the manufacturer, it will give us pleasure to make the facts known, and if it proves as worthless as the specimen we have had under examination, no coarse, ungentlemanly bullying, will drive us from our duty to the public. It is easy to prepare an article for analysis, and thus get certificates of scientific men as to its value. The question is, what is the article that farmers buy?

After the above was in type we received the following interesting communication:

40 Peck Slip, New York,
13th October, 1851.

Gentlemen—Unless you contradict, in the most positive terms, everything you have stated, with the obvious intention of injuring me, in your false and inveterately scandalous libel, published in the September number of the Genesee Farmer, I shall immediately commence proceedings against you and the Printer and the Publishers in this city. My instructions to this effect are already in the hands of my counsel, who will wait only until your November number is issued.

Yours respectfully,
Charles A. Kentish.

To the Editors of the Genesee Farmer.

We have nothing further to say, as we have made a fair statement of the whole matter, which became necessary to defend ourselves from the base charges made in Mr. C. A. Kentish's first letter, and which we felt under some obligation to publish, as requested. Those who read this article will not be at loss to decide who is the libeller. We think Mr. K. is taking the wrong course to establish the value of his *Prepared Guano*, and his own reputation for fairness.

Lost Letters.—Every year we lose large sums of money, and our friends suffer much annoyance because they are not careful enough in directing their letters. Within the past month we have had six letters returned from the Dead Letter office, containing money—one directed so that the Y. in New York looked very like an H, and in consequence it traveled to Rochester, New Hampshire, and from there to the Dead Letter office, causing annoyance at least to our subscribers, and, perhaps, some misgivings as to our promptness in answering their calls. We have now a letter from Troy, without County or State, or any sign by which we can tell its hailing point. We have sent to Troy in two different States, but the packages have returned. We might mention other letters in the same condition. Although we lose letters containing money every year, we have never received one from the Dead Letter office until lately. This leads us to think well of its present management.

Among the various classes of live stock for which premiums were announced at our State Fair, it gives us pleasure to notice those set apart for Foreign Stock. Under this head our Canadian neighbors have taken a respectable position, and we rejoice to see the spirit of improvement which they display. Mr. Wade, of Port Hope, Hon. Mr. Ferguson, of Woodhull, Mr. Miller, of Markham, the various breeders and owners of many splendid horses, &c., may be noticed as good illustrations of what our neighbors are doing. We understand that Mr. Ferguson sold his four year old bull, "Halton," three cows, and two bull calves, at prices which that gentleman considers highly satisfactory.

Webster's Dictionary—*Unabridged.*—We refer our readers to the advertisement, in another page, of G. & C. Merriam, Springfield, Mass., the publishers of Webster's Dictionary, the unabridged edition. While the opinion of Washington Irving, Lord Brougham, Thomas Dick, Geo. Bancroft, and others, of equal celebrity, stand recorded in its favor, it would be superfluous to add our own. Indeed, so many good things have been said of the work both in Europe and America, that nothing is left for us to say, except to endorse the opinion of others.

Premiums awarded at the New York State Fair.—We should have given the premiums awarded at the late State Fair, in this number, if we could have procured a correct report. The report published in the papers contain many inaccuracies, and we have waited in vain for a correct copy from the Secretary. The Chairman of the Committee on Merino Sheep, J. L. Eastman, of Lodi, informs us that the first premium on Merino Bucks was awarded to Reed Burritt, of Tompkins county, and not as stated in our last.

The Manufacture of Raisins.—In a future number we shall give the process of making raisins, as practiced in the best establishments on the continent of Europe. The request of our correspondent for information was received just as we were going to press, and consequently too late for this month.

Premiums.—Those entitled to premiums for subscribers obtained the present year, who have not received them, will please notify us, as we have forwarded all not previously sent, with this number. We may have committed some errors, and if so wish to correct at once.

A good Cow.—Luther Hovey, of Henrietta, has a cow that calved the 17th of February. The calf was sold the 18th of March for $4.63, and 28¼ lbs. of butter was made in the time, which sold for 14 cents, making $8,62 from this cow in one month.

Lost Numbers of the Farmer.—We can supply any numbers of the Farmer to those who may have lost or failed to receive them. This we will do without charge, as we are anxious our readers should preserve the entire volume.

We shall hereafter mail our paper so as to reach every subscriber by the first of the month, our extra press having arrived. We now mail as rapidly as our paper is worked off by two steam presses—over 6,000 a day.

Transactions for 1850.—We are indebted to B. P. Johnson, Secretary, for the Transactions of the State Agricultural Society for 1850 just received. We have not time to notice it particularly this month.

Melodeons.—We refer the ladies to an advertisement of these instruments. To our fancy, they are the best instrument for the parlor, and not dear enough to frighten fathers or husbands.

Advertisements, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance*.

Genesee Farmer for 1852.

One more number completes the present volume. The unparalleled increase of our circulation the present year induces us greatly to improve the next volume. It will be printed on new type, better paper, illustrated with more costly engravings, and be one-third larger than at present, each number containing THIRTY-TWO instead of Twenty-Four pages, without any increase of price. Form Clubs early.

PREMIUMS FOR 1852!

During the year 1851 the editors of the Genesee Farmer have circulated in premiums over Seven Hundred Dollars worth of the best agricultural books published in the country. These works, on *Agricultural Chemistry*, *Geology*, *Botany*, *Horticulture*, *Gardening*, *Rural Architecture*, *Farm Economy*, *the Management of Sheep*, *Horses*, *&c.*, *the Treatment of Diseased Animals*, *&c.*, scattered all over the country, even to Oregon and California, we believe, have exerted, and will continue to exert, a very beneficial influence. Their influence is not confined to those who receive them, but is felt by their children, their friends, and neighbors. They must increase the knowledge, and consequently the power, the influence, and the wealth of those for whose especial benefit we labor. The coming year it is our intention to increase the circulation of these works. We do this for the good they accomplish, as well as a slight compensation, to our friends—the friends of rural improvement—and Postmasters, throughout the country, who are acting as voluntary agents without the expectation of pecuniary reward. With a view, therefore, to this object, and to extend the circulation and increase the usefulness of the Genesee Farmer, we offer the following liberal premiums to the friends of Rural Improvement who may interest themselves in obtaining subscribers.

Premiums to Individuals.

1st. THIRTY Dollars, in Agricultural Books, to the person who shall send us the largest number of subscribers, at the club prices, before the 15th day of April next, so that we may announce the successful competitors in the May number.

2d. TWENTY Dollars, in Agricultural Books, to the person who shall send us the second highest list, as above.

3d. TEN Dollars, in Agricultural Books, to the person who shall send us the third highest list, as above.

In order to make the circulation of the books more general, and to reward *every one* of the friends of the Farmer for their exertions in its behalf, we will give to those not entitled to any of the above premiums, the following books, *free of postage*, or papers, as desired:

1st. To every person who sends us Sixteen subscribers, at our club terms of *three shillings each*, one extra copy of the Farmer.

2d. To every person sending us Twenty-Four subscribers, as above, any agricultural work valued at 50 cents, *postage paid*, or two extra copies of the Farmer.

3d. To any person ordering Thirty-Two copies of the Farmer, any Agricultural Book valued at 75 cents, *postage paid*, or three extra copies of the Farmer

4th. For Forty, any Agricultural Book valued at $1, *postage paid*, or four extra copies of the Farmer.

5th. For Forty-Eight, any Agricultural Book valued at $1.25, *postage paid*, or five extra copies of the Farmer.

For larger numbers, books or papers given in the same proportion.

☞ To save expense to our friends, we pay the postage on all these works, and persons entitled will state whether they wish books or extra papers, and make their selections when they send orders; or if their list is not complete, if wished we will delay sending until the club is full.

County Premiums.

To aid as much as possible in establishing County Agricultural Libraries, we offer the following premiums, which we hope will aid in the more general establishment of Agricultural Libraries in the Counties.

1st. We will give an Agricultural Library worth FORTY DOLLARS, to the County in which the greatest number of copies of the Genesee Farmer is taken by the 15th of April next. This Library to be kept as a County Agricultural Library under the care of the Agricultural Society.

2d. To the County in which the next greatest number is taken, an Agricultural Library worth TWENTY-FIVE DOLLARS, on the same conditions as above.

As the above premiums will probably be taken in the State of New York, and as we wish to give our friends in other States an equal chance in the competition, we offer the same premiums to Counties OUT OF THE STATE OF NEW YORK, thus:

1st. To the County out of the State of N. York in which the greatest number of copies of our paper is taken, an Agricultural Library worth FORTY DOLLARS.

2d. To the County out of the State of New York in which the second greatest number is taken, an Agricultural Library worth TWENTY-FIVE DOLLARS.

Individuals will receive the premiums to which they may be entitled, for their individual benefit, as a compensation for their personal exertions, and the numbers they send will be credited to the Counties where the papers are sent, so that the premiums to individuals will not at all interfere with the County premiums.

BACK VOLUMES of the Farmer will be furnished, if desired, and counted the same as new subscribers.

We shall keep a correct account of the subscribers sent by each person and county. In the May number we shall announce the premiums.

Libraries and *Books* will be forwarded per order, immediately after the announcement, and persons or societies can select their own books, or leave the selection to us.

☞ Specimen numbers, show-bills, &c., sent to all post-paid applicants. All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at our risk.

The Practical and Scientific Farmer's Own Paper.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, Jr., Editors.

P. BARRY, Conductor of Horticultural Department.

In issuing a Prospectus for the Thirteenth Volume of the Genesee Farmer, the Publisher flatters himself that it is too widely known, too extensively circulated, and too well read, to render it necessary to state at length the design of the work.—Those who read the Farmer are the best judges of its value, and those unacquainted with it are requested to examine its pages.

The unparalleled increase of our circulation, the present year, from TWENTY to FORTY THOUSAND, has induced us to enlarge and further improve our Journal, and for the year 1852 we shall furnish a paper that for size, beauty, and ability, will not be excelled in this country.

The new volume will commence on the first of January. It will be printed on entirely new type and superior paper, and be one-third larger than at present, containing TRIRTY-TWO instead of TWENTY-FOUR PAGES, and making a volume of 384 pages, (with title page, index, &c., suitable for binding.) at the close of the year. Our increasing circulation warrants us in making this change without any addition to the price. The volume will be appropriately illustrated—containing numerous and expensive engravings of Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Flowers, Shrubs, &c.

We number among our Contributors, hundreds of the best Practical Farmers in the country, and our readers have through our pages, the benefit of their wisdom and experience. No thinking man can read any number we issue, without receiving some useful hint in regard to the management of crops, stock, or the orchard, of more value than the price of the volume. The Genesee Farmer is by far the cheapest Agricultural Journal published in America. Our FORTY THOUSAND SUBSCRIBERS place us ahead of all other Agricultural Journals, and enables us to furnish a paper for the trifling sum of *Three or Four Shillings*, equal to any, both in value and beauty.

An earnest advocate of improvement of both the Mind and the Soil, the Farmer seeks to advance the rural interests of the country, and elevate the profession of Agriculture to its proper position. To accomplish this, it has labored long and faithfully, and not without some success. Its position as the cheapest, and at least one of the best agricultural journals in the country, is fully established, and we confidently ask for it that support which it merits from the Farmers, Gardeners, and Fruit Culturists of the United States. We invite all who feel the importance of sustaining this work, and extending its usefulness, not only to subscribe themselves, but to introduce it to the patronage of their friends.

Fifty Cents a Year, in Advance.

Five Copies for $2; Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ Post-Masters, Farmers, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post-paid or free,) at the risk of the Publisher. Address to

DANIEL LEE,
Rochester, New York.

November, 1851.

Fresh Imported Dutch Bulbous Roots.

THE subscribers have just received, in the best possible condition, a large and very complete assortment of Dutch Bulbous Roots, embracing every desirable variety of single and double *Hyacinths* for winter flowering, in pots and glasses, or for bedding out; *Early Roman Narcissus*, (usually flowers about Christmas;) the best varieties of *Polyanthus Narcissus*; *Crocus*, some 25 named varieties: early and late, single and double *Tulips*; *Jonquilles*, *Snow drops*, *Crown Imperials*, *Fritillarias*, *Iris*, *Gladiolus*, *Ixias*, *Lilies*, *Double Narcissus*, *Ranunculus*, *Anemones*, *Arums*, *Pancratiums*, *Aconites*, *Colchicums*, &c., &c., all of the best qualities, imported to order, from the oldest and most extensive Flower Nursery in Holland, warranted sound, true to name and color, and at prices as low as are usually paid for inferior roots at auction — can be packed and safely sent to any part of the United States.

A large assortment of plain and colored China and Glass Hyacinth Glasses. Fancy Crocus Pots, &c., always on hand.

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Fresh Garden, Field, and Flower Seeds, of the finest quality. Bird Seed of all kinds.

Catalogues furnished and dealers supplied on the most liberal terms.

J. M. THORBURN & CO.,
Nov. 1, 1851. [11-1t.] 15 John street, New York.

ANDRE LEROY,

NURSERYMAN, AT ANGERS, FRANCE,

RETURNS his thanks for past favors, and begs leave to inform his friends and the public in general, that his catalogue for 1851 is now ready, and may be had on application to his agent, Mr. E. Bossange, 138 Pearl street, New York. He offers for sale a large collection of the finest forest, fruit, and ornamental trees of all kinds, shrubs, &c., &c. The superior quality of his trees is already known in the United States, and the experience he has in packing up trees to be sent abroad, gives him a noted advantage over all other nurserymen. Orders should be sent early, as, although his nursery is the largest in France, the number of some new kinds of trees are limited, and some of the last orders sent last year could not be executed. The terms, prices, charges, and all desired information will be found in his catalogue. The trees will be shipped to the care of his agent in New York, who will attend to the receiving and forwarding. For further particulars, and for the catalogue, apply to

E. BOSSANGE, 138 Pearl street, New York.

☞ Agricultural papers will please insert the above three times and send the bill and a copy of each paper to E. Bossange.

Nov. 1, 1851. [11-3t]

Hurdle Fence.

A NEW and improved fence, much superior to anything of the kind now in use, formed of wrought iron, possessing therein an unusual degree of elasticity and strength. When properly constructed and well placed, they will endure for years, and never need repair. The improvement consists in the mode of securing the rails or wires. Instead of the eyes used in the older kind through which the bolts pass to bind and strengthen the fabric, the fence is now made in sectional parts, with slats in the posts, so arranged that when in place they break joints with each other. This slat in one section extends upwards, and in the other downwards, and each rail is furnished with a loop, or dead eye, turned on each end, which prevents it from passing through the slats. The usual screws are placed a distance of about three hundred feet apart. The entire fence may be tightened and prepared on the ground before it is set up. The iron clamps at the foot of each post are so turned as to present a flat surface of resistence to the earth. Price $1,50 per rod; 12½ cents in addition, if painted. For sale by the Patentee's Agent.

A. LONGETT, Office at the State Agricultural
Warehouse, 25 Cliff street, New York,
where samples can be seen. [11-1t*]

For Sale,

250 acres of the Vandeventer farm, in the town of Newstead, county of Erie, on the main road from Buffalo to Batavia, comprising the residence of the late Major Vandeventer, orchards, woodland, &c. This tract of land has always been considered some of the best on the Holland Purchase. It is well adapted to the raising of wheat, and from its springs of living water is peculiarly a stock farm. It is a beautiful situation, and with a small expense can be made the handsomest place between Buffalo and Batavia.

Inquire of the subscriber, on the premises.

Nov. 1, 1851. [11-1t*] ELISHA H. BURNHAM.

Notice.

OUR catalogues are sent gratis to all who apply *post paid*. Those who wish to save postage by having them prepaid, will enclose a postage stamp. Postage on general catalogue—

500 miles or under,	5 cents.
over 500 miles and not over 1500,	10 do.
“ 1500 “ “ 2300,	15 do.
“ 2500 “ “ 3500,	20 do.
“ 3500 “	25 do.

ELLWANGER & BARRY.
Rochester, N. Y., Nov. 1, 1851.

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Scarcely is it possible to add to the recommendation of the above book, more than to give its title page. Every one who is engaged in buying, selling, measuring or inspecting Lumber of any kind, will at once appreciate a work of this kind. No pains or expense has been spared to make it in every respect convenient and accurate.

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Agents are wanted to sell the above books in all the States. A liberal discount will be given to those who buy to sell again. Any person sending me *One Dollar* by mail, post-paid, shall have *five copies* of either of the books sent him free of charge. The books can be had of booksellers generally.

GEO W. FISHER,
Rochester, N. Y., Sept., 1851. Bookseller and Publisher.

Virginia Farm for Sale.

THE subscriber offers for sale a very desirale farm in Powhatan Co., Va., known as *Farmington*, containing 700 acres—250 acres of which, are heavily timbered with oak, hickory, black walnut, &c., and 80 acres of very superior creek bottom. The farm is in a good state of cultivation, is well adapted to wheat, tobacco, corn, oats, &c. The buildings consist of a good dwelling house with nine rooms, kitchen, smoke house, dairy, ice house, servant's house and other necessary out buildings—a large barn, with stationary Horse Power and Threshing Machine attached — a large corn house, stables, six large tobacco houses and an overseer's house.

Farmington is situated 25 miles from Richmond, and 2 miles from the James River, in an excellent neighborhood, convenient to mills, schools and churches, and one of the most healthy situations in the State.

This tract is admirably situated to divide into three farms, giving about an equal portion of creek bottom and timbered land.

Possession will be given the 1st of January next, and the privelege of sowing a crop of wheat this fall.

Terms—$10 per acre—$2500 cash, and the balance in three equal annual payments with interest.

Persons wishing a more particular description can address the subscriber at Sablett's Tavern, Powhatan County, Virginia.

October, 1851. [10-2t.] JOHN M. SLY.

Fruit and Ornamental Trees.

THE subscriber solicits the attention of nurserymen and the public to his present stock of trees, &c., which is finer and larger than at any other season, consisting in part of the following:

Standard Fruit trees of the best leading varieties.
Dwarf trees, for gardens.
Ornamental shade trees and shrubs.
Evergreen trees, larger than at any other nursery.
Roses, Pæonies, &c., with a variety of other articles generally raised in nurseries, all of which are offered at low prices.

Wholesale dealers would particularly find it to their advantage to purchase here.

CHARLES POWIS,
Monroe Nursery, Ridge Plank Road, near Rochester.
Greece, Sept., 1851.

Wanted.

WITHIN one, two, three, or four months at farthest, an honest, industrious young man, acquainted with the dairy business—that is, with the management of milch cows and selling milk in market. For such a one, I will give $180.00 a year, payable monthly, and will board the same at my own house free of expense. I will also give the same to a good gardener—one that is acquainted with raising vegetables for market. No one need be afraid of sickness in coming to Memphis. I have 25 in family, and have not had any sickness in five years. I do not believe there is a healthier place in the United States.

B. R. THOMAS.
Memphis, Tenn., Aug. 3, 1851. [9-3t*]

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It is acknowledged, both in this country and in America, to be the most copious and most excellent at present in circulation.—*Editor of the London Imperial Dictionary,* 1849.

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We rejoice that it bids fair to become the standard Dictionary to be used by the numerous millions of people who are to inhabit the United States. — *Signed by one hundred and four Members of Congress.* WASHINGTON, Jan. 31, 1850.

I possess many Dictionaries, and of most of the learned and cultivated languages, ancient and modern; but I never feel that I am entirely armed and equipped, in this respect, without Dr. Webster at command.
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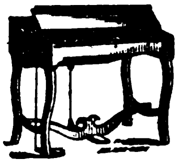
M. Miller's Patent Flutena Melodeons.



THE subscriber respectfully invites attention to the above instruments, which have now been before the public for more than twelve months, during which time they have attained a popularity beyond his expectation. They have been introduced successfully into very many respectable families and institutions in this region—also in the adjoining and Western States; and in the estimation of all who have tried them they excel in tone, durability, and elegance, any similar instrument ever invented. He therefore feels confident that they need only a fair trial to become general favorites with the lovers of music.

Owing to the extensive and increasing demand for these instruments, the subscriber has been induced to get up an extensive assortment, in different styles, varying in prices from $40 to $125.

The favor of a call from Professors, amateurs, and the public generally, is respectfully solicited.

☞ Applications for the purchase of rights to make, or of territory, can be made personally, or by letter, to the undersigned.

All orders punctually attended to.

Instruments safely packed and sent any distance.

M. MILLER, 190 Main st., corner of William.
Rochester, Nov., 1851.

☞ For sale at Columbus, Ohio, by G. & F. B Machold.

To Farmers and Planters.

THE subscriber has made a contract for a large quantity of Bone Dust ground fine, also for the sawings and turnings of buttons, which he offers for sale at $2.25 per barrel, including package. Warranted pure. Owing to the large demand this season, many were disappointed in getting their supply, without paying exhorbitant prices elsewhere. Farmers and Planters will please send in their orders at their earliest convenience, stating the quantity they will want, and at what time the same is to be delivered. It is necessary to have their orders at this season to enable me to reserve for them their supply in the spring, or earlier if they desire.

I have now on hand—Peruvian Guano, Bone Black, Wood's Renovating Salts, Potash, Oil of Vitriol, and Sugar House Scum.

GEO. H. BARR,
State Agricultural Warehouse, 25 Cliff street, New York.
Nov., 1851. [11-1t]

STATE AGRICULTURAL WAREHOUSE.

EMERY'S and Kells' Horse Powers and Threshers.

Hovey's, Clinton's, Tower's Sinclair's, Botts' and Bertholf's Straw, Hay, and Corn Stalk Cutters.

Vegetable or Root Cutters, for slicing up potatoes, beets, &c.

Corn Shellers of various patterns.

Fanning Mills of Bryant's make. This is considered one of the best mills in use. Also, Clinton & Bamborough's patent

Prouty & Mears' premium plows of all sizes. Minor & Horten's and Eagle Plows.

Harrows of Geddes, Triangle, and Scotch patterns.

Subsoil Plows of Weirs pattern, made under the direction of Prof. Mapes, which is half the draft of the old style.

Road Scrapers, Three Furrow Plows, and Cultivators.

Field and Garden Seeds.

Fertilizers, such as Guano, Bone Dust, Bone Black, Wood's Renovating Salts, Poudrette, Plaster, Sugar House Scum, for sale by GEO. H. BARR,
Nov., 1851. [11-1t] No. 25 Cliff street, New York.

A New Work on Fruit.

CHARLES SCRIBNER (late Baker & Scribner) has just published

"THE FRUIT GARDEN,"

A Treatise intended to illustrate and explain the structure and character of the different parts of fruit trees—the theory and practice of the various operations connected with the propagation, transplanting, pruning and training of orchard and garden trees—the laying out and arrangment of various kinds of orchards and gardens, selection of varieties, treatment of diseases and insects, gathering and preserving fruits, &c., &c.—*illustrated with upwards of One Hundred and Fifty Figures.* By P. BARRY, of the Mount Hope Nurseries, Rochester, N. Y. 1 vol. 12 mo.

SUMMARY OF CONTENTS.

PART I. Describes the different parts of Fruit Trees—Roots, Stems, Branches, Leaves, Blossoms and Fruit; explains their different Characters, Functions, and Practical Classifications. It treats, also, of Soils and Manures, of the best Modes of Propagation, and the General Principles and Practice of Pruning.

PART II. Treats of the Propagation and Management of Trees in the Nursery in detail, both Standards and Dwarfs, beginning with the Stocks and ending with taking up the Trees.

PART III. Treats of the Laying Out and Arrangements of different kinds of Orchards and Fruit Gardens, the selection of Trees and of varieties, Planting, Pruning, and Training of Standards, Dwarf, Pyramids, &c., &c.

PART IV. Contains Abridged Descriptions of all the best Fruits of well-established merit, with selections for various purposes and localities, and lists of new and promising varieties; also, a Chapter on Diseases and Insects; another on Gathering and Preserving Fruits, and one on the more important Implements used in Fruit Culture.

NOTICES OF THE PRESS.

"This admirably arranged volume possesses an almost incredible amount of condensed information, given, too, in so earnest and easy a manner, that, despite of the really heavy freight the mind is taking in on its way, the reader is carried on from chapter to chapter, like a smoothly running car, and we suspect few could put it by unfinished without regret, or renew its perusal without a pleasurable certainty of entertainment or profit; and we would especially call attention to the first chapter, for, remembering our own ignorance, and the no less bungling efforts of our neighbors and friends, in any operation of tree surgery, we feel how thankful we should have been if we could have availed ourselves of Mr. BARRY's kindly offered solution of the many mysteries that puzzled us then."—*Home Journal.*

"A valuable, because simple and practical, work upon fruits and fruit trees in America. The book is illustrated with drawings well calculated to assist the fruit grower, and it should be in the hands of all who have a patch of land, or who love good fruits.—*North American Miscellany.*"

"A mass of useful information is here collected, which will give the work a value even to those who possess the best works on the cultivation of fruit yet published."—*New York Evening Post.*

"This is, in brief, the title of a neat volume of about 400 pages, prepared with evident care and ability by P. BARRY, of the firm of Ellwanger & Barry, proprietors of the increasingly celebrated 'Mount Hope Nurseries.' The author is not only well read on the subject on which he treats, but in addition to his theoretical and scientific qualifications, he possesses a practical knowledge of the subject, in all its branches and bearings, that few writers have ever enjoyed.

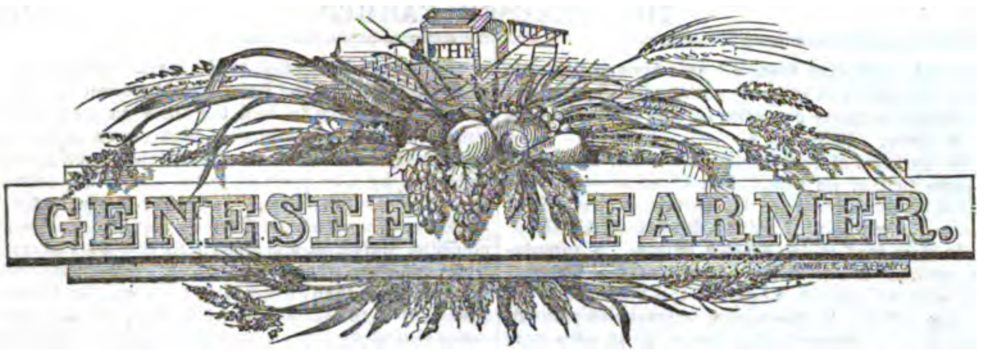
'The work before us seems to be a thorough treatise upon the properties, modes of culture and most desirable qualities of fruits in general, with selections and descriptions of the most approved varieties for especial as well as general use. And the experience of the writer in the selection and rearing of the vast and superior varieties of fruit in Western New York—the great fruit garden of the country—as well as his familiarity with all the most approved varieties of eastern and foreign fruits, invest his book with a degree of authenticity and reliability well calculated to secure to it the utmost confidence.

'Every fruit grower, whether large or small, should procure a copy of this excellent work."—*Rochester Daily Advertiser.*

"Our townsman, Mr. P. BARRY, has done great service to the cause of fruit culture and ornamenting of court yards, in this new treatise of his. The work, as the title page explains, is designed to illustrate the physiology of fruit trees, and the theory and practice of all operations connected with the propagation, transplanting, pruning and training of orchard and garden trees. It also gives many and valuable ideas upon the laying out and arranging of orchards and gardens, and, in short, is a very encyclopedia of all information pertaining to fruit and fruit culture. It is from the pen of one in the highest degree competent for the task he has undertaken, and is illustrated by many plates and figures. It is a book that should, as it will, command a ready sale wherever its author is known, and among all who desire a first rate treatise upon the subject, from a practical hand. Mr. BARRY wields his pen in a manner that does credit to him, and well illustrates the the possible union of cultivation of the soil and cultivation of the mind."—*Rochester Daily American.*

CHARLES SCRIBNER,
No. 36 Park Row, and 145 Nassau St., New York.

FOWLS FOR SALE.—A few fine Shanghae and Cochin China Fowls for sale—pure and fine—at $5.00 per pair, shipped to order. Address CHARLES SEELYE, Genesee Farmer Office, Rochester, N. Y.



Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

VOL. XII. ROCHESTER, N. Y.—DECEMBER, 1851. NO. 12.

ON THE LIMITED DURATION OF VARIETIES OF PLANTS.

Mr. John Townley, of Moundville, Wisconsin, has written an elaborate article "On the limited duration of varieties of plants," which appears in the October number of the Horticulturist. Hitherto vegetable physiology has been too much neglected by American writers on the cultivation of fruits and plants, and we are glad to see a gentleman of Mr. T.'s reading and talent leading off in so important a discussion. He is a believer in the theory of Mr. Andrew Knight respecting the limited duration of varieties of plants, and displays no mean ability in support of the same. In a practical point of view, this theory assumes that fruit trees propagated by buds, as in grafting, budding, and layering, can not outlive the natural lifetime of the parent seedling, whatever that may be. Thus, if we assume that the full age of an apple tree is two hundred years, no trees propagated from its buds can be expected to live after that time, no matter when said buds were separated from the parent tree, nor how carefully the young offshoots may be pruned and nourished. If this doctrine be sound, then there is an obvious necessity of going back to seedlings during the natural lifetime of every plant, which in the annual potato plant is of course every year. From reading, probably the same authors consulted by Mr. Townley, we confess to have formed the opinion that in growing potatoes and other vegetables, it is necessary to recur occasionaly to seeds, instead of continuing to propagate from buds indefinitely; but more extended research and observation lead us to question the existence of any essential difference in the vital force of plants and trees, whether they spring from seeds or buds, resulting from their origin. Neither Mr. Knight, Mr. Loudon, nor any other practical cultivator, has, to our knowledge, shown any greater deterioration in *bud-lings* (to coin a term) than may be found in *seedlings*, if either be badly treated. All living things are liable to disease as well as to die, no matter what their parentage. Hence, the existence of weakness and constitutional deterioration is peculiar to no varieties of plants or animals; and as buds are one of the natural provisions for the multiplication of plants, and composed of cells precisely as seeds are, why should we infer, without positive proof of the fact, that a being developed from a bud is inferior in any respect to one developed from a seed? Art gives to a bud no new vitality—no new function. All that it possesses are natural endowments, and as free from defects as any seed whatever. If a parent egg, or seed, or bud, has any constitutional infirmity likely to affect injuriously the generation about to be ushered into a larger existence, the fact that such malady is hereditary, or communicable from parent to offspring, proves nothing for nor against either system for extending a race. The *system* being one of nature's contrivances, or the offspring of Creative wisdom, is not defective in itself; but the failure to attain satisfactory results in trees grown from buds, arises from bad management in unwise and short-sighted man. We may not know wherein we fail in potato-culture or fruit-culture in using the vital agency of buds; but it is more philosophical to attribute our misfortunes in that line to our ignorance of the causes of blight and unexpected decay in tubers and fruit trees, and our neglect to comply with nature's laws, than to ascribe it to a natural defect in all buds from which plants and trees are propagated.

Mr. Townley assumes many things as true which are not sustained by any facts adduced by him, or other evidence known to physiologists. He starts with the assertion that vegetable life, like animal life, has its fixed periods of duration. Strictly speaking, neither the life of animals, nor that of vegetables, has any "fixed period" when it must cease to exist. Nor is there anything in common in the modes by which the bodies of plants and animals are nourished and preserved from dissolution, that should make "the duration" of the life of a tree as fixed as that of a man or ox. Every part of the tissues of an animal, including its solid bones, tendons, and skin, as well as muscles, nerves, brain, and other organs, is constantly being absorbed and removed out of the system as effete matter; and this loss must be made up by new and appropriate aliment, fresh from a recent supply of food, even in adult animals that gain nothing in weight. Nothing like this is seen in the support of a tree, or in vegetable life. The matter organized in the first year of the growth of an oak, remains as a part of its system ten centuries, should the tree stand so long. During all this time, after the cells of the heart-wood are filled and closed, vitality has as little to do with them as it has with those in a coral rock formed before our continent existed. There are numerous external influences that operate to prevent trees living any longer than we see them flourish in forests. They are attacked from without, and rarely die, like animals, from any organic or vital defects. If trees were never too thick in a forest, were duly protected from all animals and parasitic plants, watered, and properly manured, an oak might live twenty or thirty centuries as well as it now does two or three. Why not?

The duration of the existence of trees resembles far more that of an island than of an animal. An embryo island rises above the surface of water in a river and gains in size by the deposit of additional matter upon that which existed before. A circulating medium brings a new supply of raw material from year to year, to augment the volume of the growing island. So the seed of a forest tree planted, by the hand of nature on this same island, adds year by year to the weight of organic and inorganic matter contained in the tree, drawn from surrounding elements. Dr. Schleiden, and other botanists, describe trees believed to be 5000 years old, and still living. What has such a tree which gains in weight every year for fifty centuries in common with an animal which is never two days composed of the same atoms, and whose life depends on a liberal supply of organized food, even after it has ceased to grow? Plants subsist on mineral, or disorganized elements, such as air, water, and earthy substances.

We will not say that there is no limit to the duration of varieties of fruit trees and of plants, for even continents do not last always, and families, and whole classes both of vegetables and animals, become extinct from unknown causes, apparently to give place to new races called into being by infinite wisdom. Geology abounds in facts illustrative of transitions of this kind. The popular idea inculcated by Mr. Townley, that "varieties of plants" are of quite limited duration, is an easy and not unnatural excuse for the mismanagement of fruit trees, potatoes, and other crops. Mr. Knight, with all his artistic skill and large experience, did not comprehend the very modern science of feeding plants; nor was the excellent and truly learned Loudon better informed in that particular. This is no more to their discredit than is the fact that electric telegraphs, printing by sunbeams, and reaping by horse-power, have been discovered since their time.

Cold and heat, sunshine and shade, humidity and dryness, insects and fungi, decaying mould and undecomposing minerals, and excess of some elements and a deficiency of others, a feast of poisons and a want of food, are the extraneous influences which limit the duration of varieties of plants. These are sufficient to account for the early death of cultivated trees, and the premature dissolution of roots and tubers, without gratuitously assuming that there is some natural defect in the vitality of buds. The life of plants is well enough, whether communicated by buds or seeds, just as God has made it. But to understand how buds and seeds change their cellular into a vassular tissue, how substances imbibed through the leaves of trees can descend to their roots in a current of constantly ascending sap, and how each bud has a separate existence, so that a sweet and a sour apple may touch each other and yet preserve their peculiar qualities unmixed, requires more study than most cultivators bestow on this branch of their profession.

Is it not wonderful that so many thousands and millions of intelligent persons should eat apples from their childhood to old age, and never try to learn how an apple grows, nor to understand the nature and properties of the things which really make an apple? The editor of the Horticulturist hit the nail on the head when he called attention to the marked deterioration of Seckel pears in the Philadelphia market in consequence of neglect to feed the trees on which they grow, while the same kind of fruit grown in the less congenial climate of Boston has recently been greatly improved by wisely adapting the soil to the natural wants of the pear tree. We have lately attended a number of agricultural fairs in New York, Massachusetts, Maryland, and elsewhere, and more to study fruits and learn what we could from the most successful cultivators, than for any other purpose. Mr. Clark, President of the Hampshire, Franklin, and Hampden Agricultural Society, (one of the oldest in the Connecticut valley,) assured us that an apple tree there needed feeding as much as a horse does. The fruit on old apple, pear, and quince trees, which have been neglected, is worthless; while that grown on old trees treated with leaf-mould, rotten dung, ashes, and lime, is fair and large. In no market in the United States can one study the results of good culture and no culture in fruit growing, to better advantage than in Washington. The soil in the District of Columbia, and the adjoining country, lacks lime, phosphoric acid, and potash, to a degree that tells againt both forest and fruit trees, as compared with Western New York and our own valley of the Genesee. We have studied the soils and natural products of both regions with some care, and while conceeding the superiority of climate to Washington, the elements of fertility are comparatively scarce in the rocks, drift, alluvium, and mold of that section. But we have never seen land more readily recuperated with lime, ashes, guano, or stable manure. The climate is admirable, and the proportion of sand, clay, and iron, which are the foundation of all soils, is generally all that one needs to secure high and enduring productiveness. It is but few things that fruit trees, grape vines, potatoes, grass, and grain, require from the earth, and these man must supply so far as they are lacking. Science alone teaches him what these things are, and those that neglect or despise it, choose darkness rather than light.

TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY FOR 1850.—VOLUME X.

It gives us pleasure to witness the steady improvement in each volume of the Transactions of the New York State Society, as issued from year to year. The one before us is distinguished by an elabor[illegible] and admirably executed "Survey of Seneca county," by J. Delafield, Esq., the able and excellent President of the Society; by a paper on "Agricultural Dynamics," of decided merit, by J. J. Thomas; and by an unusual amount of contributions from other reliable sources of information. If a million copies of the work were distributed over our thirty-one States and five Territories, and generally read, the instruction that would be imparted could not fail to change the present disastrous policy of the country in the abuse of American soil. To every one who can procure a copy we earnestly recommend to do so, and not forget to study the analyses and valuable researches of Dr. Salisbury, chemist to the Society.

Mr. Delafield has given a beautiful map of Seneca county; illustrations of its Rocks, and their Organic Remains; of Grasses; Weeds injurious to Crops; Insects; and a vast fund of interesting historical, statistical, geological, chemical, meteorological, and strictly practical information. The work will make a good sized volume printed by itself, and we trust it will soon appear in a form to give it a much more extended circulation than it can receive as a part of the annual proceedings of the Society under whose auspices it has reached the public.

Our impression is that these "Transactions" might be somewhat more condensed with advantage, with a view to induce the Legislature to print a larger number of copies for the same money. We go for scattering the good seed with a liberal hand, broadcast over the whole State, and a little beyond. No other Commonwealth in the Union draws so many dollars into its treasury from other States, as New York, through its Erie Canal; while our great commercial metropolis, and score of smaller cities, enjoy in an eminent degree the rich trade and patronage of the cultivators of the soil throughout the Republic.

New York ought to do far more than she does for the promotion of agriculture; and if her active business men saw how much science and art can do to augment the fruitfulness of the earth, and the profits of trade and commerce, there would be no holding back of means required to diffuse agricultural knowledge among all the cultivators of the soil.

Volume X contains 729 pages, is handsomely illustrated, and reflects credit on all concerned in its production.

A UNIVERSITY FOR THE PROFESSIONAL EDUCATION OF FARMERS AND MECHANICS.

In the years 1817, 1818, and 1819, when County Agricultural Societies were first established in New York, the writer was serving his apprenticeship in the town of Warren, Herkimer county, in this State, with one of the best practical farmers within its limits, in learning a profession which is still loved and cherished above all others. At that early day we desired above all things to attend an Agricultural College; and before being fairly engaged in the study of the healing art, we visited Albany when the Legislature was in session, to see what chance there was for the establishment of an institution for the professional education of young farmers. The law-makers of that era were unsophisticated, and talked out plain English after this fashion: "Young man, if you are willing to become one of the thousands of supernumerary physicians of the country, we proffer for your encouragement three good medical schools, with their anatomical museums, dissecting rooms, chemical laboratories, libraries, and six or eight learned and able professors in each institution; but if you seek equal scientific attainments in connection with tillage and husbandry, (the business of your father,) we will not render you the least assistance whatever." This language was not to be misunderstood; and to our knowledge it has been substantially repeated to every youth seeking a respectable agricultural education in this great State during the last third of a century. We have witnessed the endowment of several *new* medical colleges, and the refusal to give the first dollar to aid in the establishment of an agricultural school. This cruel injustice has been so long and so unflinchingly practiced by ignorant farmers and more ignorant lawyers, who have controlled the legislation of the State. If New York were poor and unable to help those noble youths who are willing to eat the bread of honest manual labor, to some knowledge of the natural sciences, in that practical, common sense way which will meet their means and their wants, we should never have uttered a word of complaint. But New York, with her incomparable Erie canal, her rich lands, her score of cities, and her most industrious population of three millions, has unmeasured resources for the increase of agricultural and mechanical science. Why, then, attempt to extinguish forever the light of this invaluable science? It has wronged no human being; it asks only an equal chance with medical science as supported at the public expense, in the cities of New York, Albany, and Buffalo. We have never objected to the professional education of doctors, lawyers, and military officers, at institutions adapted specially to the purpose. So far from that, we claim that this practice is founded in sound public policy, and that our industrial professions equally deserve the aid of science and special institutions, where the young farmer can dissect all the animals which he is expected to breed and rear, and thereby learn the form and function of every organ, whether it digests food, elaborates milk, fat, flesh, bone, or wool. The improvement of domestic animals is a great desideratum, and involves much anatomical and physiological research. So long as hundreds of young stock-growers and dairymen earnestly seek to extend their professional knowledge in this direction, to benefit themselves and the community at large, it is both mean and disgraceful in the Legislature to deny them the benefit of one agricultural school in a State that contains a half million of farmers.

Young friends, send in your petitions early, and write often to your representatives on this subject. Let them know that you are in earnest in the matter.

Millard Fillmore once carded wool and fulled cloth as an honest apprentice should. Suppose he had stuck to his trade to this time? What chance would he then have had of being now President of the United States? We tell you frankly, that any system of education which compels an ambitious youth to leave the shop of the mechanic and the fields of the farmer to graduate in a lawyer's office, before he can rise under our republican form of government, is radically defective. Professional men now enjoy an amount of intellectual training and discipline which are invaluable to them, but denied to practical farmers and mechanics. If our reasoning faculties be not fully developed, it is the decree of a good Providence that we shall be forever looking *up* to men who are looking *down* upon us.

EXTRACTS FROM ENGLISH PAPERS.

THE GREAT EXHIBITION.

On Friday the receipts at the doors amounted to £2,415 15s., the number of visitors being 23,694. The temperature in the interior of the building was cool and pleasant throughout the day, the mean being, according to Bennett's thermometers, 54.4. This, combined with the partial exclusiveness secured by half-crown admissions, enabled all who came to see to advantage the different objects of interest which they were desirous of inspecting.

In another fortnight the Great Exhibition closes, the Crystal Palace will have fulfilled its purpose, the tide of cab and omnibusses will cease to flow towards Kensington, and those vast assemblages of spectators which for months past have made pilgrimages from every corner of the globe to the shrine of industry, will be deprived of the centre around which their curiosity attracted them. When that event happens, the grandeur of the demonstration which has taken place in favor of the peaceful arts, will be more distinctly appreciated, and the results, beneficial or otherwise, which the display leaves behind it, will be calmly ascertained and realized. In the meantime it behooves all who can afford it, not to lose the few remaining days of opportunity for the survey of an unparalled spectacle such as in our day we can hardly hope to see repeated. For the first time since the world began, the different nations of the earth have collected into one focus the choicest specimens of their natural wealth and their industrial products. Within a building happily adapted for the purpose, thousands of people of all ages, and from every country have assembled to view this spectacle. Four millions and a half of visits have been paid to it since the opening; nearly £400,000 has been realized by admission fees, the greater proportion consisting of shilling payments. The popularity of the Exhibition became its greatest wonder, and many who went there to study the marvels of manufacturing skill could only gaze at the multitudes which they attracted to Hyde Park. There is a magnetic power about large masses gathered in one vast edifice, and swarming in happy excitement along spacious avenues, where their numbers will tell upon the eye, which eclipses every other spectacle, however splendid or interesting. Man is superior to the choicest example of his handiwork, and never have vast assemblages been seen in a situation more imposing. Those who have witnessed the aspect of the building on a crowded shilling day, will not readily forget the strange and indescribable sensations with which it inspired them. Who can say that we shall ever be able to witness such sights again? It is not a small excitement which drags up humble provincials *en masse* from the country—which induced an old woman of 84 to travel on foot all the way from Land's-end—which sends a bushel and a half of watches in one night to the shop of a single pawnbroker in Leeds, and which so stirs the heart of private benevolence throughout the kingdom, that even our charity schools, and the inmates of our workhouses are largely represented at this jubilee of industry. On the ground, therefore, of popular excitement alone, few of us can expect to see such a spectacle as that which is now about to close repeated in our day. Let those who have not yet visited the Crystal Palace, and who have it in their power to do so, defer no longer. After the 11th of October it will be no longer possible for them to take the measure of the industrial arts in the middle of the 19th century. Books may supply them with the fullest information on the subject, but they can never touch the heart, or stamp their lessons upon the memory, like a personal inspection of the display. For ourselves we have always felt our powerlessness in dealing with the details of a collection so vast and comprehensive. An exhibition which embraces every kind of industrial product cannot be grasped within the limits of a newspaper article, and a history of it, if attempted, would exhaust the patience of the most indefatigable reader. The bare classification of objects occupies 18 closely printed foolscap pages. The power of discussing advantageously each division of that immense classification, involves a minute knowledge of every art to which the ingenuity and the labor of mankind have been directed, and is plainly impracticable in a journal. For the determination of excellence in each department, the public may, therefore, be most safely and authoritatively referred to the awards and reports of the different juries. There are, however, general results which it comes fairly within the province of the press to point out—particular inventions, to indicate the importance of which justifies a special notice, and lessons of experience for the guidance of our future industrial career, which ought not to be lost sight of. Many of these topics have from time to time been touched upon. Others may not suggest themselves till long after the Exhibition has closed; but now, when the 11th of October is so near at hand, the discussion and solution of such questions become more urgent; it is necessary to gather up the threads of interest which the spectacle in its progress has brought into light, and to trace out the full significance of facts and objects which we have still for a limited period before our eyes.

A distressing occurrence which took place in the building on Friday, threw a considerable amount of gloom upon those of the visitors who were aware of it. In the central refreshment rooms, a gentleman was observed to fall down in a fit. The large printed placards on boards, which are always in readiness, with the words "A medical man wanted at the south entrance," printed upon them, were put into requisition and three medical gentlemen immediately responded to the call. Upon examination, however, it was found that life was extinct, and the deceased was conveyed by the police to St. Margaret's Workhouse. There was nothing found upon him to afford any clue as to the name or residence of the unfortunate gentleman. His linen was marked "T. T."

On Saturday £1,852 2*s*. 6*d*. was taken at the doors of the building, the number of visitors being 20,236. During the afternoon a most extraordinary specimen of gold ore from California was placed in the American portion of the nave, which, from its size and evident richness, attracted an immense amount of attention. In appearance it is a huge block of quartz rock, impregnated in every part with the precious metal, and the value of it may be estimated from the fact that the fortunate owner refuses to part with it for a sum of £3,250. He has arrived in England with this specimen for the purpose of buying machinery to work the vein in which it was discovered, and he is himself as curious and interesting an object as the contribution, being fresh from the diggings, and wearing a gold watch chain of the most preposterous dimensions. The recently discovered gold mines in Australia are also now represented in the Crystal Palace, at No. 51, class 23.

With but two exceptions—viz: the 15th of July, when the number of visitors was 74,122, and the 21st of July, when there were 70,640—Monday was the most numerously attended day since the opening of the Exhibition. The number returned by the police was 68,542, the amount received being £3,295 15*s*.

THE HUNDRED AND THIRTY-FIRST DAY.—Tuesday again saw a vast attendance at the Crystal Palace. The number, exceeding by nearly a thousand that of Monday, was 69,346; being the largest attendance, with the exception of Tuesday, the 15th, and Monday the 21st of July. The amount received was £3,303 4*s*. Among the visitors were many children from various schools, including, among others, those belonging to the British schools of Petersfield, Hants.

Notwithstanding the inclemency of the weather, the receipts at the doors on Wednesday amounted to £2.830 11*s*., the number of visitors being 59,050. It rained fast and furiously as the hour approached for the building to close, and great was the dismay and confusion, the demand for cabs, and the cramming of omnibusses, in consequence. The south entrance of the transept was completely blocked up with impatient and distressed waiters upon the skyey influences. The distress manifested by the female portion of the assemblage for the prospective destruction of their finery, was particularly affecting, nor in the wildest flights of Bloomerism could anything be found more grotesque than the arrangements of dress which were made to neutralize as far as possible the effects of the weather. Gowns were inverted, and petticoats tucked up with the most unhesitating energy, while, by one of those extraordinary examples of the law of supply and demand, umbrellas of every size and quality sprang up in forest-like abundance. Of cabs and omnibusses there was, as there always is on such occasions, a dreadful deficiency, so that a large proportion of the people had to trudge, under the pelting rain and ankle deep in mud, on their way homewards.

On Thursday, notwithstanding the unfavorable state of the weather, 64,298 persons visited the building; and the receipts amounted to £3,080 12*s*. 6*d*. Among other arrivals came 30 boys and 20 girls belonging to the Ragged School, Pye street, Westminster, who obtained admission by subscriptions from the benevolent, sent in consequence of an advertisement on the subject inserted in the Times. There were also 18 old people from Bletchingley, whose expenses were defrayed by the rector and other gentlemen in the parish, whose joint ages amounted to 1,141 years. Such facts, but the former especially, taken in connexion with the daily incidents of a similar character, place beyond possibility of question the propriety of that decision which refused free admissions to our charitable institutions. Had the numerous applications made upon this subject been acceded to, we should not have witnessed those delightful and gratifying efforts of private benevolence, the statistics of which, when collected at the close of the Exhibition, will furnish one of the most interesting and remarkable features of the many collected with its diurnal history. We are happy to hear that numerous and valuable presents are being made by exhibitors to the Royal Commission for the formation of a permanent museum after the present display in Hyde Park has terminated. An opal of extraordinary beauty, from Hungary, has just been added to the Austrian collection by Messrs. J. Goldschmid & Son, of Vienna.

We understand that it has been decided that the two days which will remain between the close of the Exhibition to the public, on Saturday the 11th, and the meeting of the Commissioners on Wednesday, the 15th of October, will be devoted exclusively to exhibitors and their friends. It is intended to send to each exhibitor a ticket, which will admit himself and two friends upon Monday the 13th, and Tuesday the 14th, without any payment for admission; and the ticket will also admit the exhibitor alone upon the 15th, to the ceremony of receiving the report of the jurors, and other business connected with the proceedings of the day. This decision on the part of the Commissioners, will, we have no doubt, be duly appreciated by those for whose benefit it is intended.—*Gardeners' and Farmers' Journal.*

REAPING MACHINES.

Thanks to the officers of the Carlisle Farmers' Club, the agriculturists of the district around Carlisle had an opportunity of seeing the celebrated American Reaping Machine (McCormick's) at work on Wednesday last.

The scene of operation was Kingmoor House Farm (about two miles from Carlisle) occupied by Mr. Ellwood. Great curiosity was excited. Crowds of people came far and near. The first trial was made in a perfectly level and even eight-acred field of oats, one-half of which had been previously cut with the scythe—and cut, too, in a workmanlike manner. The crop was light. The machine, having been put together on the ground, was set agoing at eleven o'clock, and with about three-quarters of an hour's interval between twelve and two, continued till half-past four. In the latter part of the day the machine was worked in a second field, having a considerable declivity, and a very rough surface. caused by recently made drains and deep furrows, the soil having shrunk, and, in fact, causing a second furrow. This ground was purposely selected in order to subject the implement to a severe practical test. In the first field the cutting was rapid, regular, and closer to the ground than we had been led to expect; in the second field, though the crop was heavier, and so far favorable, there was less perfection, but equal rapidity; yet, under the circumstances, the work was satisfactory, and well done.

On the whole, though there might be shades of opinion, the result was a general acknowledgement that success had been achieved—that the expectations raised by the inventor had been realized.

Mr. Burgess, of the firm of Burgess & Key, of London, who have purchased of Mr. McCormick the right of patenting the invention in the United Kingdom, followed the machine and directed its movements; while an American attendant, Mr. Mackenzie, a Virginian agriculturist, took his station on the board behind the horses, and right manfully and dexterously applied the rake in throwing off the grain, in quantities about the size of a sheaf, as it was laid upon the platform by the revolving action of the fans. Order was preserved by Mr. Sabbage and seven policemen, one of whom, besides himself, was mounted. Though there was occasionally some pressure arising from over anxiety, there was nothing to complain of on the part of the million.

There can be no doubt that essential improvements will be speedily introduced, and that the work of the man and rake will be better done by machinery and the same power which effects the operation of cutting.

On the whole, all the practical men were well pleased with what they saw on Wednesday. Most of them pronounced the experiment successful, and more than one gave orders on the spot. A single machine might be made to do the work of an entire parish; so that we shall probably not only see joint stock machines, but machines let out at so much per day, or so much per acre.—*Carlisle Patriot.*

But there are rivals already starting up. An implement called "Hussey's American Reaping Machine," was last week tried at Hadham Hall, near Bishop's Stortford, Herts, and its effect upon barley, clover, and wheat, are described as astonishing as well as satisfactory. It is made by Dray & Co., London; but nothing is said of its price or the amount of work done per hour. It appears, too, that there is an "Australian Reaping Machine," which is worked with two teams of bullocks, eight each, one man to steer, and a boy to drive. "We can reap and thresh," says the writer of a letter professing to give an account of it, "eight or nine acres per day in good hot weather. We paid £70 for it. There are some light machines made for horses; but ours is a strong substantial article, and is drawn by bullocks, and a chain attached to the near side corner. There is a comb in front about four and a half feet wide, the teeth of which are only wide enough to take in the straw below the ears; a drum works on the back end of the comb, threshes out the wheat, and throws it into the machine. We keep the winnowing machine going at the end of the field, and by this means we have the wheat ready for the market at once. The straw, of course, is left in the field, but that is not much regarded in this country; most people burn it, but when the weather is very hot and dry it can easily be harrowed off."

Another Reaping Machine.—Perhaps it may not be out of place to mention here, that it is expected before long another competitor will be in the field—Mr. Hammond, of Ripon, in this county, who has also invented a Reaping Machine, with which he threatens to eclipse both the Americans. He proposes by his implement to cut and lay into swathe twenty-two acres of corn or grass in eight hours (supposing the horses walk three miles an hour); and it will require only one man to manage the whole, which it is said he can do with the greatest ease imaginable, without even leaving his seat.—*Yorkshire Gazette.*

THE LAST APPENDIX TO "YANKEE DOODLE."

Yankee Doodle sent to Town
His goods for exhibition;
Everybody ran him down,
And laugh'd at his position:
They thought him all the world behind;
A goney, muff, or noodle;
Laugh on, good people—never mind—
Says quiet Yankee Doodle.
Chorus.—Yankee Doodle, &c.

Yankee Doodle had a craft,
A rather tidy clipper,
And he challenged, while they laughed,
The Britishers to whip her.
Their whole yacht-squadron she outsped,
And that on their own water;
Of all the lot she went ahead,
And they came nowhere arter.
Chorus.—Yankee Doodle, &c.

O'er Panama there was a scheme
Long talked of, to pursue a
Short route—which many thought a dream—
By Lake Nicaraugua.
John Bull discussed the plan on foot,
With slow irresolution,
While Yankee Doodle went and put
It into execution.
Chorus.—Yankee Doodle, &c.

A steamer of the Collins line,
A Yankee Doodle's notion,
Has also quickest cut the brine
Across the Atlantic Ocean.
And British agents, noways slow
Her merits to discover,
Have been and bought her—just to tow
The Cunard packets over.
Chorus.—Yankee Doodle, &c.

Your gunsmiths of their skill may crack,
But that again don't mention,
I guess that Colt's revolvers whack
Their very first invention.
By Yankee Doodle, too, you're beat
Downright in Agriculture,
With his machine for reaping wheat,
Chaw'd up as by a vulture.
Chorus.—Yankee Doodle, &c.

You also fancied, in your pride,
Which truly is tarnation,
Them British locks of yourn defied
The rogues of all creation;
But Chubb's and Bramah's Hobbs has pick'd,
And you must now be view'd all
As having been completely licked
By glorious Yankee Doodle.
Chorus.—Yankee Doodle, &c.

—*Punch.*

STEAM PLOWING.

An experiment was made last week, on the Grimsthorpe estate, near Bourne, of the possibility of adopting the power of steam as an instrument in turning and plowing the soil The engine was placed on a moveable tram-road, and by way of testing the relative powers, the plow was drawn in one direction by four powerful horses, and contrarily by steam. The horses dragged the implement with much labor, while the engine, of 26 horse power, hurried it back as fast as a man could fairly walk to conduct the plow. The result was exceedingly satisfactory, and it appears that two engines, placed parallel at each end of the field, would, without difficulty, with only a double plow, complete four acres of land in ten hours, and, if required, subsoil it also. Plowing by steam. also posses the advantage of avoiding all indentations or basins, as when plowing with horses. To give an idea of the expense attending the employment of this machine, we may state that the cost of plowing 24 acres with it is calculated at only £6 16s., while, if horses were used, the expense would be £9 12s., being a balance of £2 16s. in favor of steam power. The experiment was made by Lord Willoughby d'Ersby, who has for a considerable period been endeavoring to introduce the system of plowing by steam.—*Hull Packet.*

A further experiment has been made, and Lord Willoughby d'Ersby will shortly invite the committee of the Royal Agricultural Society to witness the result of his experiments. —*Sheffield Times.*

Steam Plowing in East Lothian.—The subject of steam plowing has for some time past engaged the attention of the Marquis of Tweeddale, who has been long known for the attention he has so successfully bestowed upon agricultural affairs, and indeed for the indefatigable zeal with which he prosecutes almost every branch of science or art which he makes his study. His lordship has at length succeeded in bringing to a great degree of perfection a steam plow, with which some interesting experiments have just been made. Without entering into minute technical explanations, we may state the general principle of action as follows: A locomotive engine is stationed at each end of the field, and moved as the furrows are completed. The plows, having the Tweeddale mould-board, are fixed on both sides of a frame (the upper being of course reversed) which is turned over at the end of each set of furrows, for the purpose of performing the same operation on its return. The implement has been fairly tested at Yester, the seat of the Marquis in Haddingtonshire, and performed its work beautifully. On Saturday last, one engine was in use as a primary trial, when the plow frame was conveyed on finishing each set of furrows, to the other end of the field, and the land plowed at the rate of three and a half miles an hour. On Monday, his lordship had two engines on the field, with the plows constantly at work between them. The operation of turning the frame at the end of the furrow is very perfect, and the success of the whole affair undoubted, the calculation of work done being at the rate of 15 acres per diem. There were present on the field, in addition to his lordship's family, Lords Brougham, Elcho, and Cawdor, the Hon. Capt. Gray, Mr. Lawson, of Edinburgh, and Mr. Butler, of Faskally, Sir John Gordon Sinclair, and Sir George Grant Suttie, besides several of the neighboring farmers, who all expressed their admiration at his lordship's successful endeavors in this most important application of steam power. A good deal of practical criticism was elicited; and we believe the Marquis, who has always been ready to avail himself of such, still intends making certain improvements.—*Scotsman.*

RAT-PROOF GRANARY.

Eds. Gen. Farmer:—A correspondent of yours writing from Waukesha, Wis., asks for information in relation to the construction of a "Rat-proof Granary." Now I am not ambitious to have my name appear in public print, but I think I can inform your correspondent how he can build a granary that will keep in the grain and keep out "the rats." Tell him in the first place, to plank it with inch and a half hemlock plank, with tight joints; batten the cracks, or clapboard, as best suits his taste; lay a tight floor of hemlock inch boards, and cover this floor half an inch thick with lime mortar, and then lay another floor of inch boards while the mortar is soft and nail them down well; this insures the bottom of his granary. Put up the bins next, one across the back end four feet wide, and one on each side of the same width, having four feet space in the centre for an alley and door way. (This plan is for twelve feet square; he can alter the dimensions to suit his wants.) After this is all done, lath the walls and overhead plaster them with mortar made of lime and coarse sand. Put a window in the back side, if he wishes; nail some tin around the casings, also around the casings of the door. A granary constructed in this manner will, I think, be sufficiently "Rat-proof" for all practical purposes. J. C. Bates.—*Sheridan, Oct.*, 1851.

POTATO MALADY.

There is an old saying—"Every thing must have its day." Several years ago I advanced the opinion, that the potato disease would eventually disappear of itself. I still think so, although the evil seems to prolong its stay apparently "beyond the appointed time." I argue from analogy, thus: Epidemics are periodical, whether they fall on man or beast. This needs neither argument nor illustration. Pests, in the shape of insects are periodically more troublesome and destructive than ordinary in one year, and then less so in another. I have known seasons in which they existed in overwhelming numbers, followed by one of almost entire freedom from all such annoyances. An example of this kind is now before me: Last year, and several years previous, my peas were full of bugs, scarcely one escaped; this year not a bug is to be seen, although I planted earlier than last year. The weevil in wheat first appeared in the Eastern States. It is now traveling to the West, and wheat begins again to be raised in the East.

In the year 1742, a disease similar to the present potato blight destroyed the potato crop in Ireland. This, it may be said, was confined, so far as is now known, to a single season, while the present evil has continued for years. True, but it appears now to be diminishing, and may have nearly "run its race" in this part of the country. The great Providential restriction, "Hitherto shalt thou come, but no further," seems applicable to all natural and physical evils; and I know not why the potato malady should be an exception. (See closing paragraph of this article).

If this view of the subject be incorrect, there is another that may be taken, viz.: That the evil must either be regarded as a judgment or chastisement; or be designed to lead to investigation for the purpose of discovering some important physical truth; or to carry out the original declaration concerning man; or to drive him from the use of the potato to something better.

1st. *As a chastisement, a judgment.* That physical or natural evils are sometimes to be regarded in the light of judgments, there can be no reasonable doubt; but there seems no valid reason why the potato blight should be so regarded, any more than why the rust on wheat, or the weevil, the blight on fruit trees, &c., should be regarded as such. This idea then cannot be separately admitted, as all these evils are of a kindred character.

2nd. *Investigation for the purpose of leading to the discovery of some important physical or natural truth.* Whether there was any providential design in the matter, or not, it is well known that the visionary investigations of Alchymy laid the foundation for the science of Chemistry; and many of the inventions and discoveries of modern times have resulted from investigations pursued for other purposes. Is there yet any important natural law, or physical truth, now unknown, which would be likely to be discovered by the investigation of the potato blight? Let us consider the subject.

3d. *To carry out the original declaration concerning man—"In the sweat of thy face shalt thou eat bread."* It may be that, amid all the improvements in modern life, life is in danger of being too easily supported; that man is in danger of degeneracy for want of employment; and hence it is necessary to furnish additional calls for industry by rendering the means of support more difficult and laborious While, however, I would not deny the possibility of the truth of the supposition, (for the support of which, some considerations might be adduced,) it does not seem consistent with our ideas of the destiny of the world, and of the human race,—progress and improvement.

4th. *A change from the use of the potato to something better.* When the potato was first introduced into Europe, a very strong prejudice existed against it for many years; nor were its virtues acknowledged and its general cultivation and use introduced until a general scarcity approaching to famine prepared the way. Since that time it has been of incalculable advantage, especially to the poorer classes of all nations. Have the times, has the condition of the world, or the state of society, so changed, as to require a change in the pabulum of life? Is there any product of the vegetable kingdom that promises to be a substitute for the potato? The subject may be worthy of consideration.

In conclusion of the matter, however, I return to my first position, viz: that the potato blight will have its day, and eventually pass away. It may disappear soon, or it may yet be several years before it shall be "among the things of the past." It may be driven away by the light of science, *i. e.*, by an application of the knowledge and industry of men, or it may disappear of its own accord. In the meantime it is highly desirable that investigations be diligently prosecuted. Important results may follow. H.—*Down East, Oct.*, 1851.

AMERICAN PHOSPHATE OF LIME IN ENGLAND

The Secretary having been directed by the Council to make special inquiries on the subject of the occurrence of mineral Phosphate of Lime found in the United States, and in reference to the specimen of that substance which Dr. Daubeny had forwarded to the Duke of Richmond, replies were received from his Excellency the American Minister, Dr. Daubeny, Sir R. I. Murchison, Sir Chas. Lyell, Capt. W. H. Smyth, Dr. Shawe, Prof. Johnston, of Durham, Mr. Johnson, Secretary of the New York State Agricultural Society, Dr. Cooke, Professor of Mineralogy in Harwood University, and laid before the Council on the 25th of June last. The following results may be deduced from this correspondence:

1. The Mineral Phosphate of Lime has been found in the American States of New Jersey and New York; and there is a great probability that it will be discovered in other States of that Union, as well as in Canada; it is also not improbable, from analogical considerations, that this crystalline substance may be found to exist among the metamorphic masses of the Highlands of Scotland and elsewhere.

2. The specimen from New Jersey, forwarded by Dr. Dabeny to the Duke of Richmond, had the appearance of a remarkable variety of crystaline rock; but the formation in which it occurred was not stated. It was found by Prof. Maskelyne to contain 95 per cent. of the phosphates of lime, iron, and alumina. Its importation was made by Messrs. Jevons, of Stamford Place, Liverpool. One vein alone, discovered in New Jersey, would supply the English market for many years.

3. In the State of New York a great mass of the mineral had been discovered, and a shaft had already been sunk to the depth of thirty feet. This vein occurred at Crown Point, near Lake Champlain, in Essex county, and the abundance of the mineral was so great as to lead to the conclusion that this mine contained an inexhaustible supply; the locality was also favorable for facility of transport and ready shipment. This vein consisted of grains and crystals; and on analysis, in America, has been found to contain a much larger proportion than the Jersey mineral, of which some specimens yielded only about forty per cent. of the phosphate of lime, while the Crown Point mineral gives eighty per cent. of that substance, free from chalk, containing only a small amount of quartz in grains, and of the fluoride and chloride of lime. It is very soft, and pulverizes easily, and is more readily dissolved than the Jersey variety. It can be delivered in London, in the rough state, or powdered ready for use, as may be thought most desirable. By single-horse power two tons a day may easily be ground.

4. The price at which the Jersey phosphate was first offered was five guineas per ton; but its interest immediately ceased, in a commercial point of view, when the importers, on fallacious grounds of supply and demand, injudiciously raised the price to £7, forgetting that there were already other forms of phosphate of lime in this country available to the English farmer. It is now fully believed by moderate and intelligent Americans, that the United States phosphate can be afforded in the English market at such a price as will render it a cheap fertilizer; and, as it can easily be reduced to powder, its value cannot be doubted, provided it be treated with sulphuric acid, and thus rendered suitable as a manure for those crops for which phosphate of lime has been found by experience to be advantageous.

5. Professor Johnston, of Durham, to whose personal visit to the United States we probably owe the attention thus paid to this mineral, occurring so abundantly in that part of the world, remarks:—"American farmers in general have not the knowledge to appreciate the value of such a manuring substance as this, nor the ability to purchase it when manufactured into super-phosphate of lime; the discovery, therefore, will be a boon, for the present, to both countries. It will make more abundant and cheap the means of fertility which our soils require; while, by supplying a new article of traffic only saleable in Great Britain, it will form a new bond of connexion between our kindred nations."

Hawk Catching.—A singular but effectual method for destroying hawks, that greatest terror to all poultry yards, has recently been communicated to me. My informant says he took no less than seven the first day. They had previously been so frightened with powder and ball, that he could no longer reach them with his rifle. The world will not be much the wiser, or fowls generally more safe, on account of his discovery, unless it be published; and, should you deem it worth publishing, you may give it to your readers.

It is simply to erect, in an open field near by, a post a few inches in diameter made square at the top, and say five or six feet above ground. Place on this, a *smart* steel trap, fastened with a short chain. The intruder will be sure to take his stand there, it being a capital spot to make his observations; he sets foot on treacherous ground, is easily captured, and should be removed soon so as not to alarm others. J. M. C.—*Lansing, Mich.*, 1851.

OVER PRODUCTION.

> Suppose every farmer in the United States should adopt the plan laid down by yourself, the consequence would be double crops. &c., and there is more raised now than the farmer can sell at a fair price.—*H. Genesee Farmer, Vol.* 12, *p.* 229.

On this subject I wish to make a few remarks :

1st. One of the greatest objections to the present system of farming, is the cultivation of too much land. Many seem to think that "great and succesful farming" consists in having many and great fields under cultivation. Hence the object seems to be to extend their fields and farms indefinitely. The evils of this course are numerous : First, Comparatively more labor for comparatively less product. Second, Defective cultivation, and consequently deficient crops. Third, The exhaustion of a greater extent of land. Fourth, The necessity of clearing a greater amount of land, and consequently the waste of a greater amount of timber, &c., &c. Hence,

2d. Suppose the same amount of labor and manure to be expended on one-half of the present area of land, in such a way as to obtain a product equal to what is now obtained from the whole, what would be the result ? All the aforementioned evils would be avoided. One half the land would be left in its original virgin state, for the future use of the owner or his children. Half the amount of timber that is now recklessly, and I might say wickedly wasted, would be saved to posterity, who according to present management, are likely to suffer from our cruel extravagance.

3d. As the amount of labor required would probably not equal that now expended, some portion of time would be left to the farmer for his own social, moral, and mental improvement ; a consideration of no little importance. How many farmers now have no time for anything but their daily labors, and how few are properly enlightened even in the proper business of their profession. Hence,

4th. There would be little danger of a superabundance of produce. The farmer would be faithfully and profitably employed as now, his products the same, and his farm in better condition for himself and far better for the country and for posterity.

Farmers, try it, and see if it does not prove true. You can not lose much—you may gain much. H.—*Down East, Oct.*, 1851.

"THE CAUSE" AGAIN.—"THE REMEDY."

I fully concur in the sentiment "that agriculture has been too much neglected in this country, &c.," and as fully believe that that neglect has consisted more in the manner in which it has been conducted, than in the want of labor expended. And I believe it both on account of what I have seen and what I have heard ; for although not now a farmer, (would that I were,) yet I was brought up a farmer, and have long observed the operations of farmers. I believe I gave the principal "Causes" in the September number of your excellent paper, page 211. To these I now add the general desire of our farmers to enlarge their possessions, to the neglect of improving well what they have ; and the greater ease with which great crops are obtained from new lands, than from old. Both these causes have produced their effects.

"The Remedy."—The remedies are chiefly two :

1st. "*More light.*" I know we call ourselves enlightened, but the light is general—*i. e.*, as a nation we are comparatively an intelligent people ; education is general ; and yet how many there are who are very ignorant on almost every subject. So with farming. How few, comparatively, know anything more about farming than simply the mechanical part—*plow, sow, reap*—and this very imperfectly. How few read, or are willing to read, anything on the subject of their calling. Hence the need of more light, a light that shall enlighten *all.*

2d. *Necessity.* Improvements are generally slow, and especially when they interfere with our usual habits, or when we do not believe them to be improvements, (such is the condition of many farmers,) and seldom adopted till necessity compels. This necessity is beginning to be felt. Hence we begin to witness some improvements. Let this necessity continue, and improvement will be more and more manifest. H.—*Oct.*, 1851.

VALUE OF ASHES.

Eds. Gen. Farmer :—As a slight return for the many benefits received at the hands of yourselves and correspondents, I beg leave to lay before your readers the following statement of facts.

On the 25th of last April I planted one-half acre of potatoes on ground that had been manured and broken up a short time previous. The potatoes were dropped in the first four rows, and the ashes applied by the handful to the hill at the rate of fourteen bushels to the acre, and then covered as usual. The next four rows were not ashed ; the same alternation was continued through the whole piece. During the growth of the vines, the appearance was decidedly in favor of the ashed rows. The "blight" struck them the 6th of August. On the 3d of October I dug eight rows ; the four which were *ashed* yielded *six* bushels, and the four which were not ashed yielded three bushels, and those from the ashed rows were much superior in quality. This gave three bushels of potatoes for one of ashes. Potatoes are now worth from 37½ cts. to 50 cts. per bushel. Perhaps I should observe that the kind planted, is known in these "diggins" by the name of "Door-yards." There was not a dozen rotten ones in either case. John W. Doubleday.—*East Scott, N. Y., Oct.*, 1851.

WASHING WHEAT.

Eds. Gen. Farmer :—As most farmers who sow spring wheat (and nearly all sow it here) are obliged to wash it, or use some other means to keep it clean from oats and foul seeds, I send you my method of washing, which you can publish if you think it worthy a place in your valuable paper. It is as follows :

I take about three pecks of wheat and put it into a common wash-tub, then fill it with water, and after stirring it up well take off the oats and other foul seeds that rise to the surface ; but as a good many of the oats will not rise to the surface of the water, many find it difficult to separate them from the wheat. I do it in the following manner :—After stirring it up well from the bottom, the oats will be found to be on and near the top of the wheat ; then with a small paddle or stick stir around the outside of the tub, so as to give the water a rotary motion, when the oats will be seen to gather in a heap at the centre of the tub ; remove them, and stir as before until all are removed. Wheat can be washed much cleaner in this way than it can in any other I ever saw tried. H. Thornton.—*Yorkshire, N. Y., Aug.*, 1851.

Inquiries and Answers.

Messrs. Editors :—The October number of your paper contains a call for information in regard to the prevention and cure of Murrain. With your leave, I will give the result of my experience.

First, the preventive : Let them have at all times plenty of pure water and plenty of salt ; mix salt and sulphur together and place it in a trough under shelter where your stock can have access to it at all times ; and lastly, give to each animal a table spoonful of pulverized rosin once in three months. This dose should be varied according to the age and size of the animal.

The Bloody Murrain, if left to its course, proves rapidly fatal, and in order to be treated with success, must be attacked in its earliest stages and subjected to energetic treatment. My mode of treatment is, first to give a large dose of rosin, then follow with draughts of decoction of smartweed made strong and given in large and repeated doses. After careful and repeated examinations of cattle that have died of Bloody Murrain, I have become convinced that the seat of the disorder is in the kidneys, hence the utility of rosin both as preventive and cure.

As regards Dry Murrain, I believe salt mixed with wood ashes in the proportion of three to one, and kept within reach of the animals, to be an effectual preventive. J. R. Taylor.—*Waterford, N. Y., Oct.*, 1851.

Messrs. Editors :—In the last number of your paper inquiry is made relative to a new species of fly that has lately made its appearance at Reading Centre, N. Y., described as half an inch in length, with yellow body, and covered with a reddish furz, inhabiting the dung hill. If I am not mistaken, it is an old acquaintance of mine. Some twelve or fifteen years ago, a fly answering the above description first made its appearance in Thomaston, Me., where I then resided, and seemed to confine its operations to the dung hill. The same season I found my onions partially destroyed by maggots ; the next year they were nearly all destroyed. I tried it again, and they took the whole. I then gave it up. So far as I could learn, its ravages were confined to the onion alone, the cultivation of which was entirely suspended within the circle of my acquaintance. It commenced by depositing its eggs upon the top of the onion when quite small, and continued the process through the season. The young fly emerges from the soil of the onion bed early in June, and is then of a grey or ash color, with a slender body, and sluggish in its motions, with little disposition to fly. It retains its ash color, till nearly grown, when it puts on its golden yellow coat with reddish furz. I know nothing of its history or habits, only that it is death on onions. I used as a remedy salt and ashes, and lastly a strong decoction of tobacco and burdock without the least effect, they seeming quite as fond of tobacco as their persecutor. I have little doubt that they were brought in in some vessel from a foreign port, as no similar fly had ever been seen there before. D. K.—*Waukegan, Ill., Oct.*, 1851.

Eds. Gen. Farmer :—In an article in the "Philadelphia Evening Post," I noticed the extract of a letter to the "Farmer" from a gentleman in Virginia, expressing the wish that 100 or 150 northern farmers would come there and buy a tract of land, which could be got at an average price of four dollars per acre, with improvements. I take the liberty to ask a few questions, for answers to which I should be very much obliged to you.

1. Can land be got there at the same prices by only buying from 100 to 300 acres.
2. What kind of land is it, and is there any timber on it for fencing ? I suppose it is worn out tobacco land.
3. Is it well watered by springs, and is the water soft or hard ?

I intend to sell my water-cure establishment and go west to buy land, but would prefer Virginia should the expense be not too great in recovering the land. C. Baelz.—*Brownsville, Pa.*, 1851.

Eds. Gen. Farmer :—Is it possible that your population are all for moving South ? In answer to a communication of mine in your paper, I have received some hundreds of communications, from Maine to Illinois. I cannot possibly answer all. Allow me to say, small farms are difficult to be had with good improvements ; but farms containing from 250 to 1000 acres are plenty and most of them suitable for division. The usual payments for lands are one-third cash, balance in one and two years. A man may work as hard as he pleases and is thought none the less of. Wages of negroes are about $100 per annum, board, clothing, doctor's bills, risk of running away, &c., at the risk of the hirer. Work required to be done, if chopping, six cords per week ; all overplus to be paid for to the negro. Other work in proportion. Holidays—visiting his family—say six weeks, not less, in the year. White hands about the same, or not quite as much. The crops raised, depend altogether upon the culture and seasons, from seed to fifty bushels per acre. This season the wheat crop is unprecedented for quantity and quality.—Oats, owing to the long severe drouth, say half a crop. Corn may be a fair crop. Tobacco not more than half a crop. Peaches in profusion. Apples, but middling. Early frost sometimes kills early wheat, sometimes the rust, and sometimes the fly. Casualties same as elsewhere. Fruit misses say every third year, partially.

But I suppose no man will think of buying without looking for himself. There is plenty of land to be bought, but the capabilities are being brought out and lands are rising in value. I will venture to say that the region from head of tide water to the Blue Ridge, is as healthy as any other, and possesses as many of the advantages of living; but I would advise no man, except in particular localities, to settle singly, but for a company to purchase large tracts and divide to suit. T. E.— *Chesterfield, Va.*, 1851.

GAPES IN CHICKENS.

Eds. Gen. Farmer :—I noticed in your last number an article on "Gapes in Chickens," and having considerable practical experience in raising poultry, I have thought it not amiss to give my views.

In the first place,.I think the Gapes are generally caused by using wet feed, and that too fine. The old way is, to soak bread in warm water and feed the little fellows with it as soon as they are hatched : this readily forms a paste, and their stomachs are clogged. The difficulty is, we distrust nature and wofully misjudge the power that the Creator has placed in even the little chicken to digest its own food. When I can get screenings from the mill, I feed them with it. If that is not to be had, I feed them with very coarse Indian meal, just cracked, dry. Give them water in a separate dish, and they will wet the food in their crops to suit themselves. I have raised turkeys this year in the same way. I have neither jammed a "pepper-corn" down their throats nor "greased" them, yet I never saw healthier or nobler birds, and I have not lost one ; while my neighbors, with their pepper, their sour milk, and their curds, fail to raise more than half, and those that survive the treatment look as if they had the consumption. Wet food in warm weather is soon soured, and sour food is unnatural to any creature, unless their taste has been greatly vitiated. It must be wrong to "pinch off the shell on the point of the beak.' How unnatural ! ! C. W.—*Lake Grove, N. Y.*, 1851.

P. S. I think it is time S. W.'s Notes should be "shorn" of their free trade doctrines. C. W.

Coop up poultry to fatten, and they will do well up to 12 or 14 days. Keep them in the coops beyond that time, and feed them as you like, they will grow leaner every day until they grow a skinful of bones, and die.—*Ag. Gazette.*

Gooseberries.—Fourteen hogsheads of gooseberries were entered at the Boston Custom House on Saturday, 30th August, imported in the ship Hampton, from London.

IMPROVEMENT OF WHEAT.

We are anxious that an intelligent and systematic effort be made to improve all the better sorts of wheat grown in the United States. To promote this object, the Genesee Farmer will pay a premium of five dollars to the person who will send to the office the head of wheat whose seeds shall weigh more than the seeds taken from any other single head.

A premium of three dollars will be paid to the one who shall produce the most weight of grain from a single seed; and

A premium of two dollars for the head of wheat containing the largest number of seeds, regardless of their weight.

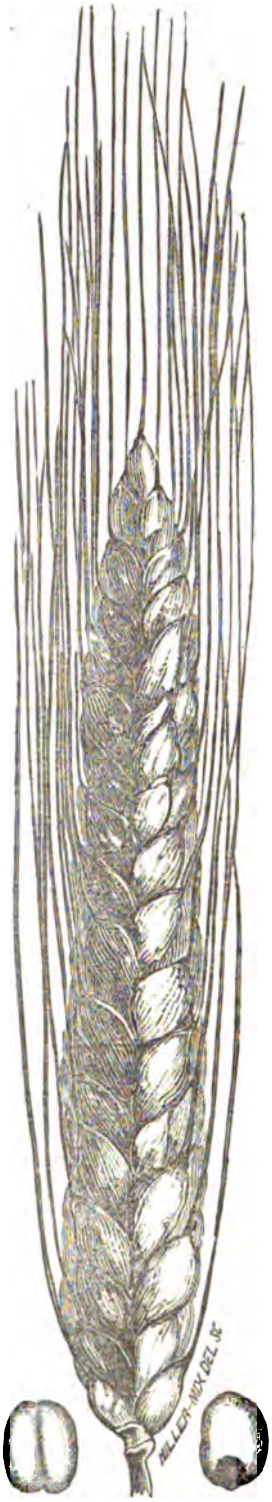
The Secretary of the New York State Agricultural Society, B. P. **Johnson**, Esq., exhibited heads of over sixty varieties of wheat at the recent State Fair, which he obtained in France. We examined these specimens with some care; and, apparently, none were superior in quality, or equal in size to several kinds grown in this country. Some of them, however, are said to withstand the attacks of fungi (rust and mildew) much better than American wheats. On this account, if no other, the best wheats grown in France deserve a fair trial in our climates and soils.

The reader will find in connection with this article an exact likeness of two heads of bearded wheat of the natural size, the one produced from seed originally brought from the Mediterranean by a naval officer who obtained it near Mount Ida, and we named it "Troy Wheat" in putting it up for distribution at the Patent Office. The other is known by the name of "Australian Wheat," which sufficiently indicates its origin. Both of these varieties deserve further trial, and we shall be thankful for any facts relating to either that may be of interest to wheat-growers. Mr. **Davidson**, of Greece, Monroe county, N. Y., has produced the best heads of wheat that we have seen anywhere this year; and we hope that he will continue his experiments. The best oats which have been received at the Patent Office were from the farm of the Hon. **John M. Clayton**, late Secretary of State.

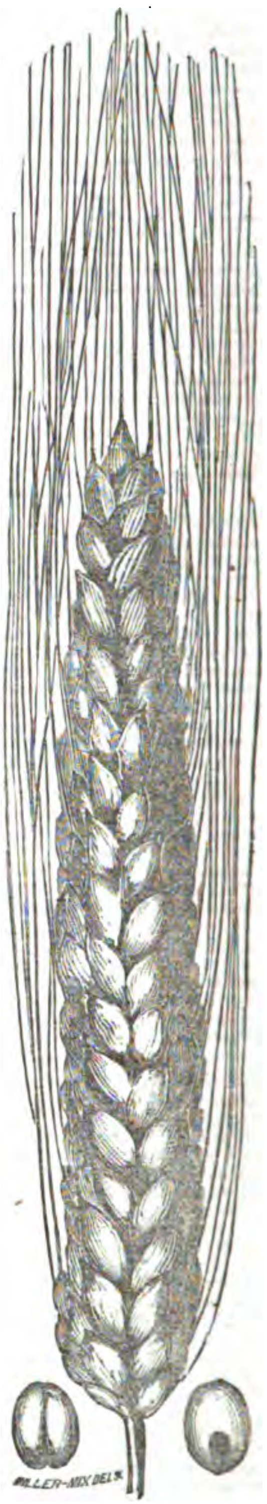
Those that desire to produce large ears of wheat, must not allow many stems to grow from a single seed. A single one will doubtless be better than to permit more heads or ears to mature. A half bushel of seed equally distributed over an acre, should each seed produce a plant and not one tiller, but all send up single stems each bearing one hundred seeds, the yield would be fifty bushels per acre.

To grow a large per centage of wheat in proportion to the straw, is an object of vast importance in a national point of view; and to attain this result in a small way, let the experimenter saturate a few bushels of leached ashes with chamber-lye, and apply the fertilizer in such a manner as to be thoroughly incorporated with the soil in which wheat is to grow, and not so much as to injure it.

It is our purpose to collect samples of all the varieties generally known in the United States for experiment, and we solicit a few seeds of


MILLER-MIX DEL. SC.

TROY WHEAT.


MILLER-MIX DEL. SC.

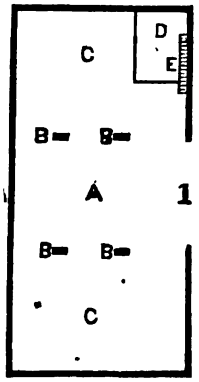
AUSTRALIAN WHEAT.

any kind our readers may have which is distinct, with a short description of the same. In return, we intend to distribute gratuitously the best seeds which we can procure either at home or abroad. We go for improvement because we believe in it — not to speculate, nor for the almighty dollar.

The head of Troy wheat which we have had drawn and engraved, was grown by Mr. C. **Howell**, of Ogden, from seed procured at the Farmer office; that of Australian was grown by Mr. **Davidson**.

PLAN OF A HAY BARN

Eds. Gen. Farmer:—I saw in the Farmer of March last, page 69, a draft of a Barn with a manure cellar, which attracted my attention considerable, and as you appear to be in favor of drawings, and not being exactly satisfied with any plan presented, I send you a plan on which I should build a Hay Barn for myself. An addition can be added for grain to suit the fancy. As I am a reader of your valuable paper, I am bound, with others, to convey whatever I consider to be worthy of its columns to its editors.



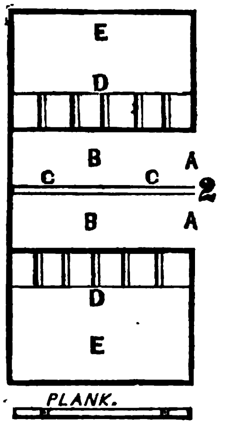


Fig. 1 represents the lower or basement story, 44 feet long. A, Manure cellar; B, B, B, B, Pillars on which the frame work of the building rests; C, C, Compost cellar, the compost to be put in in the spring and remain till wanted; D, Cellar for vegetables; E, Stairs leading up to the floor.

Fig. 2 represents the floor of the barn. A, A, Barn Doors; B, B, Stable floor, 18 feet wide; C, C, an opening to throw down the manure and litter into the cellar, 9 inches wide, the opening to be covered with a plank and fastened there by short bits of scantling fastened to the plank by means of iron screws; the scantlings drop through the floor and hold the plank in its place. D, D, Stantions and Mangers, 3 feet wide, the stantions to be shoved back against the mow when the barn is filled; E, E, Bay 14 feet wide.

By a scaffold over the floor, you can fill your barn full of hay, except where the cattle stand. You then fodder into each manger from each mow, and your cattle stand rumps together, and the manure drops in the center of the floor. By raising the plank, you throw the manure, with the litter, into the cellar below, which, if your compost was prepared in the spring, it is ready to throw into the manure heap to save the leakage of the cattle. Whoever carries out this principle correctly, if he does not find his cellar full of manure, he may tell me I am mistaken and consider me worthy of my name.

A. **Blockhead.**

A COMMODIOUS FARM BARN.

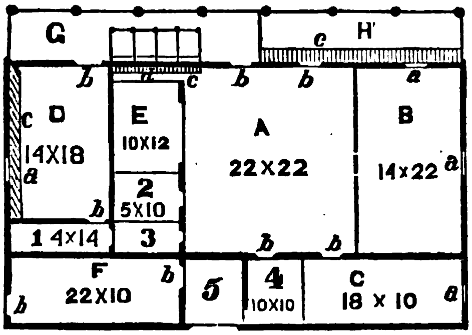
Messrs. Editors:—As I have been much pleased with many of the plans for farm houses, and also barns, laid down in your very excellent paper, I propose, knowing that it adds great beauty, as well as comfort and convenience, to a farm to have a good barn as well as a good dwelling house, to place at your disposal the ground plan of a barn which I deem very commodious, especially to we farmers,

> "Who hail the mountain morning air
> O'er verdant slopes arising."

This plan, though somewhat similar to some in the Farmer, is very unlike others, inasmuch as it does not provide shelter for such *quadru-bipeds* as root or scratch, as I think there will be *rats* enough, in spite of you, to supply the vacancy occasioned by the displacement of the *small fowls*. And if I should be allowed my humble opinion, I would say that poultry of all kinds should have separate departments, as the lice that infest the feathered tribes are often very annoying to horses and cattle, besides they are apt to haunt the granaries.

To the end, then, that I may perhaps give one new idea, I place the following plan before your many farmers, hoping that from the many plans laid down in your excellent paper, some of us may be able to make a "compound extract," or a perfect barn, as there is nothing that I hate worse

> "Than long stories, and short ears of corn,
> A costly farm house, and a shabby barn."



GROUND PLAN OF BARN.

Description.—This barn is 60 by 44 feet, outside. A, Threshing floor, 22 by 22; B, Grain or straw room; C, Oats room, 10 by 18; D, Stable with stalls, 14 by 18; E, Reservatory for next year's planting seeds, 10 by 12; F, Workshop, with plenty of farming tools, 22 by 10; G, Open shed, with stalls for milch cows, 35 by 10; H, Open shed for oxen or colts, 25 by 10. 1, Cutting room, 14 by 4; 2, Wheat garner, 5 by 10; 3, Passage; 4, Depository for farming utensils; 5, Grand entry. *a*, *a*, *a*, High windows; *b*, *b*, *b*, Doors; *c*, *c*, *c*, Feeding racks; *d*, Passage by a rack. Over D, E, and 1, 2, 3, is a hay mow, 22 by 24.

This barn, if on sidling ground, may be raised, and below serves for a sheep house. A **Hoosier.**—*Harrodsburg, Ind.*, 1851.

Horticultural Department.

EDITED BY P. BARRY.

THE CLOSING YEAR

The year which closes now, may be regarded as one in which horticulture in this country has made extraordinary advancement. We might have written, and perhaps did write, this a year ago, for 1850 was emphatically a year of progress. But 1851 has outdone all its predecessors in this respect. Never, we are very sure, has the various branches of horticulture received so much attention, in one year, in all parts of America, as it has done in this. The nature of our business puts us in possession of facts that bear us out in saying this. It seems as if our people had awoke from a long slumber, conscious that they had lost many years of precious time, and determined to make amends by increased activity. How are we to judge of these things? By the demand existing for trees and other nursery commodities, and the increased number and increased patronage given to horticultural books and periodicals. Those not familiar with these things may judge from the improvements that have been made in their own neighborhoods. Ten years ago, three or four nurseries around New York, Boston, and Philadelphia, were able to supply nearly all the trees wanted on the continent. They even were small, compared with some modern establishments, and their stock not unfrequently outgrew the demand. Now the country is covered with them; one can scarcely find ten miles square, from one extremity of the country to the other, without a nursery of some sort. In Minnesota, only heard of the other day, nurseries are being started, and tree planting is a standard topic with the juvenile newspapers of that region. A gentleman called on us a few days ago from Oregon, and informed us that he had a nursery there of several hundred thousand trees, and he was buying seeds and stocks to extend his operations largely.

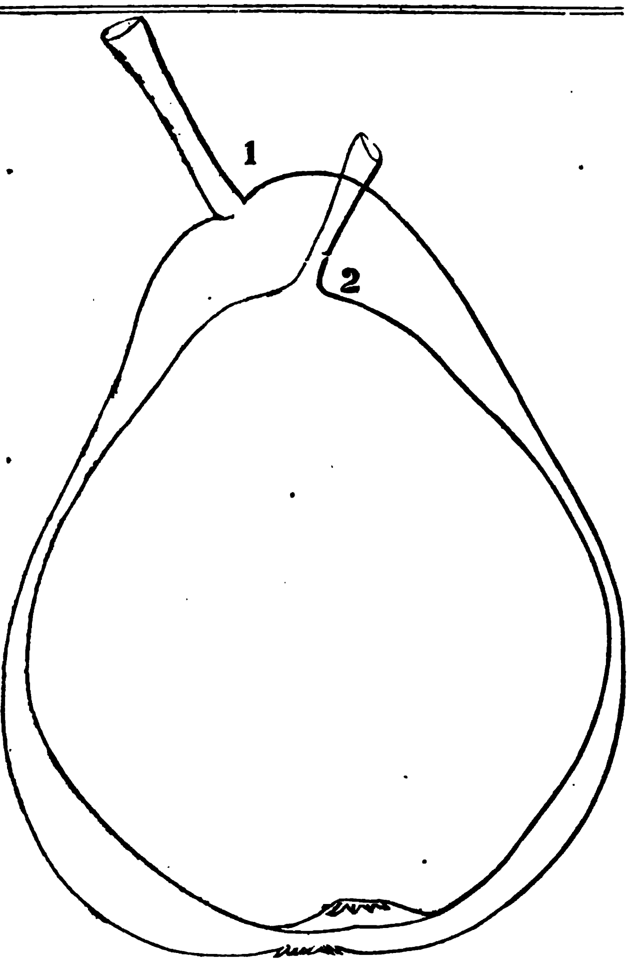
Look into the advertising pages of the agricultural and horticultural journals and see what an array of nurseries are inviting customers. The Horticulturist alone, for the month of October last, advertized more trees, and especially fruit trees, than were ever advertised before in any one journal in any part of the world. This indicates the spirit of the times in regard to planting, for nurseries only grow up with an increasing demand for their own productions. The fact is, tree planting is the business of the day. Our large cities are increasing in population at an amazing pace, and this increases the demand for fruit and encourages the planting of orchards. But a large share of the demand comes from country towns and villages where prosperous business men and mechanics are making their homesteads. No man now-a-days thinks of living on a treeless piece of ground. Farmers, too, far into the interior of the quiet country, are catching the planting spirit and extensive orchards and nice fruit gardens are springing up about their houses. So it will go on till every one who has a bit of ground shall have planted trees. Then we are not like other countries, relying on the natural increase of our own population; tens of thousands of foreigners are poured in upon us annually and are breaking up the virgin soil of whole regions of wilderness, and preparing it for orchards and gardens. The annual increase of cultivated territory in the United States, is far greater than people generelly are aware of.

But look at the increase of horticultural books and periodicals. We have now three large and excellent monthly magazines, one at Boston, one at Albany, and one at Cincinnati, exclusively devoted to horticultural affairs, and all are well sustained. Then we have many agricultural journals in which horticulture occupies a prominent place. Only a few years ago there was but one horticultural journal in the United States, and not over three or four agricultural, all of which combined did not enjoy a circulation equal to that of this journal at the present moment. Then within six or seven years there have been half a dozen important works on fruits and fruit culture published, besides Mr. Downing's numerous and costly volumes on architecture and landscape gardening. To all these we may add the two elegant colored serials now in course of publication—Hovey's "Fruits of America," and Dr. Brinkle's "American Pomology." Only think of such an amount of horticultural reading called into existence at once it may be said. We may well inquire what will ten or fifteen years more do for us with such a foundation as this to build upon? Truly we are a go-ahead people.

The *useful* department of horticulture, that is the culture of fruits and vegetables, has made the greatest progress, but the ornamental or tasteful has received perhaps as much attention as could be expected in a country like ours, where money-making is the watchword of the day.

People are easily persuaded to plant fruit trees, because their *utility* is obvious and little skill is required in their management; but both taste and skill must be acquired before ornamental culture is attempted. Hence ornamental gardening will advance in proportion to the diffusion of horticultural books and papers that cultivate taste and spread information. There are at this time more ornamental plants cultivated and sold in American nurseries, in one year, than there was in five a very short time ago. In Western New York, in 1840, there were not, we will say, west of Albany half a dozen acres devoted to ornamental plants altogether; now one establishment alone in this town has nearly twice that.—There cannot be less than fifty acres devoted to rose culture alone in the United States, and perhaps much more. A few years ago there were but two or three cultivators at New York and Boston that had good collections of dahlias; now we might name fifty. A short time ago but three or four American nurserymen imported trees or plants from Europe: and lately one European nurseryman informed us that he had more than forty American customers on his books. Grape culture under glass is receiving considerable attention, and foreign grapes that could only be seen in the graperies of a few wealthy men around Boston, are now exhibited in all our exhibitions. In a few years, from present appearances, a cold vinery will be considered an indispensable appendage to the fruit garden, and many, even in towns and cities, who have no gardens, will endeavor to enjoy the luxury of a grapery. Cemetries and town parks are attracting attention, and as taste becomes more general, and examples multiply, every town and village in the land will have its rural cemetry, well planted and embellished, and its public park and avenues. We are approaching this state of things rapidly ; every day brings forth new evidences of advancing civilization.

We took up our pen to write an article on a very different subject to this, but the closing number of the year brought up this train of thought and awakened these suggestions on the progress we are making. We point to them with great pleasure, for we hold that the advancement of horticulture amongst a people is a much stronger evidence of a noble and refined civilization than the construction of either railroads or telegraphs.—Men may be barbarians to all intents and purposes, and yet conduct the machinery of commerce with great skill and success ; but when we see the homes made comfortable and beautiful, fruit and flowers clustered around them, cemetries for the dead tastefully laid out and embellished, and public parks and promenades looked upon as indispensable, we cannot escape the conviction that the public mind is impressed with a deep sense of the beautiful and the good.



DESCRIPTIONS OF NEW PEARS.

BY B. DESPORTES, ANGERS, FRANCE.

DURING our journey in Europe we spent a couple of very pleasant days with Mr. ANDRE LE ROY, of Angers, proprietor of one of the largest and most celebrated nurseries of Europe. We were not only well pleased with the great establishment and the system of culture pursued in it, but with the great kindness shown us during our stay, both by M. LE ROY and his accomplished assistant, M. DESPORTES, who paid us a visit in this country a few years ago. Mr. D. promised us an account, from time to time, of such novelties as might be interesting to us here, and as a first instalment has kindly sent the following :

1. *Beurre Milet of Angers* Pear. — Fruit large, regular, obtusely turbinate, resembling the *Summer Francreal* or *Bergamot d'Ete*. Skin greenish yellow, covered with russet dots. Flesh buttery, melting, juicy. Quality first rate, deserving of extensive cultivation. Tree vigorous and pyramidal in shape. Originated in the Society's Garden at Angers. November to January.

2. *Fondante du Comice of Angers.* — Tree of medium size, branches slender and spreading. Fruit very large, pyriform. Skin pale greenish yellow, shaded. Flesh yellowish white, melting, very juicy and aromatic. First rate. October and November. Raised in the garden of the Society at Angers.

THE Rose garden of the Royal Botanic Society in the Regent's-park, notwithstanding the unfavorable opinions of some well-meaning but mistaken critics, continues to form a very agreeable and attractive feature of this institution. Owing to the beautiful weather which has for a long time prevailed, the plants have grown remarkably strong and healthy ; and consequently many of the later sorts are now to be seen to great advantage. The nakedness observable in the early part of the season, owing to the recent removal and replanting of the several collections, is now, after two or three months' luxuriant growth, almost entirely concealed. This was, of course, to be expected ; and judging from the present healthy appearance of the plants, as well as the profusion of bloom displayed, we think there is but little to fear that this experiment will ultimately come up to the expectation of the enterprising rose growers by whose combined exertions it has been begun. Though now somewhat late in the season, the display of flowers in this department at the present time is by no means insignificant.—*Gard. and Far. Jour.*

HINTS FOR THE SEASON

The Season.—The autumn in Western New York has been fine. We had what might be termed a wet, cold season, till about the first of August; after that it was warmer and dry, so that trees ripened their wood well. We had no frost to injure vegetation until about the 25th of October. Dahlias, and other autumn flowers, remained in full bloom until that time. On the 26th the leaves were blackened and began to fall, giving to the woods and gardens a real autumn aspect.

Care of Autumn Planted Trees.—We need hardly remind those who have planted trees this autumn, that they cannot be too careful in having them secured by stalks against being blown around, and mulched with leaves, litter, or rough manure, to the depth of six inches or more. Those that have been taken up, and laid in for spring use, should be in very dry, sandy ground, and laid in an almost horizontal position to avoid the effects of cold winds.

Dahlias.—Take up the roots on a dry day, lay them in the sun, or on a dry floor, till *perfectly dry* in every part. A week of drying may be necessary. Then put away on shelves in a very cool cellar. They will require looking to occasinoally during winter, and mouldy or decaying parts removed.

Gladiolus, Tiger Flower, Tuberose, and other tender bulbs, must be taken up, dried, and put away in boxes of dry sand, or on dry shelves, in a cellar for the winter. Cut off all flower stems and decaying parts.

Hyacinths, Tulips, Narcissus, Crocus, Crown Imperials, Hardy Lillies, and all *hardy* bulbs may be planted as long as the ground remains open. The soil should be deep, dry, rich, and finely pulverized for them all; and when planting is done, cover with leaves six inches deep. This covering can be raked off early in spring, as soon as frost is out.

Peach and Plum Stones may either be sown this fall before the ground freezes, or laid in thin layers and covered lightly with earth to freeze and thaw during winter. If kept dry they will not germinate next season.

Seeds of all hardy trees may also be sown before winter sets in, if the ground be *quite dry.*

A CHALLENGE TO HORTICULTURISTS.—Five years ago I began to set an orchard. This fall I took from one Baldwin tree three bushels and a half of apples like the sample I send you; from a Rhode Island Greening, two and a half bushels; from a Roxbury Russet, a half bushel—all like the samples sent. The manner of cultivating my trees are set forth in a pamphlet I published this fall. I further challenge the United States to produce so fine samples of peach, cherry, plum, pear, apricot, and nectarine trees, for the time they have been set. The apples, when transplanted in the orchard, were about six or seven feet high; cherries the same; peaches were maiden plants. The orchard contains 1200 peach, 1500 pear, 200 cherry, and 200 apple trees. I sold from five peach trees $25 worth. LEWIS BURTIS.—*Rochester, N. Y., Sept.,* 1851.

We can say, from personal knowledge, that there is not, in Western New York, a finer or better cultivated orchard than that of Mr. BURTIS.—ED.

ANSWERS TO CORRESPONDENTS.

(N. W. RANDALL, Bristol Center, Ont. Co., N. Y.) Your apples came to hand in good order. No. 1 is a pretty and good autumn sweet apple—have not seen it before. No. 2 is *Blue Pearmain.* No. 3, don't know. No. 4, *Baldwin.*

(J. R. F., Barre.) Honey locust seed sow in the spring and scald before sowing, as you did the other. Osage Orange seed can be procured here in the spring, at the seed stores. Red cedar seeds are never offered for sale here.

(AUG. A. FAHNESTOCK, Syracuse.) The buds of the Augusta Rose were received in good order. It resembles the *Solfatare,* being of a sulphur yellow and very sweet. If *hardy* and a good climber, like the *Chromatella,* it will prove an acquisition. We would be glad to be informed on this point, as its great value depends on this.

(THOS. J. MARKS, Bayfield, C. W.) The Horse Chestnut can not be grafted or budded successfully on either the ash, elm, beech, maple, cherry, oak, butternut, basswood, or any of the common fruit trees. It is easily grown from seed. The red and yellow, and other *varieties* can be *budded* on the common sort, or the Buckeye or Ohio Horse Chestnut.

GRAPE HOUSES.—(B. C. C., Tyrone.) We have been promised a description of a cheap vinery by a gentleman who has recently erected one, H. L. SUYDAM, Esq., of Geneva. It will give you the information you want exactly.

PROTECTION OF TENDER GRAPE VINES.—(L. C. CRAWFORD.) Prune, lay it on the ground, and cover with earth, or straw, or leaves. Uncover and tie up to a stake or trellis, when the frosts are over in the spring.

SEEDS.—(Miss J. P., Engellsville, N. Y.) We would cheerfully comply with your request, but the seeds cannot be obtained here.

RED CANADA APPLE.—(H. G., Jefferson Valley.) We will comply with your request and give a descrption of this fruit as soon as possible.

FLOWERS.—(JANE A. VERMILYE.) We are happy to hear of your success in floriculture, and have placed your application for another supply of seeds on file. It will receive attention, with others, in due time. Your statement, and others of a similar nature, give gratifying evidence that our efforts to awaken an interest in the cultivation of flowers have not been wholly in vain.

(JAMES MARTIN, Taylorsville.) Water melons may be grown successfully on the same ground for many years, if it be properly renewed and enriched with suitable composts and manures. But in this, as in all crops, a rotation is advisable.

Apple and peach trees may be advantageously mixed in the same orchard, where the soil is suitable for both; but many good heavy soils adapted to the apple, will not answer for the peach.

ACKNOWLEDGEMENTS.—We are indebted to H. L. SUYDAM, Esq., of Geneva, N. Y., for fine samples of Grapes from his vinery.

—To LEWIS BURTIS, Esq., of Rochester, for beautiful *Baldwin* and *Greening* apples from his orchard.

—To D. A. BARKER, of North Bergen, N. Y., for specimens of Apples, of which we do not know the name.

—To H. S. SPRAGUE, of Newark, Ohio, for a specimen of the *Rawles Janet* apple from Indiana.

Ladies' Department.

FAIR AND FLOWERS.

The perusal of letters we are every day receiving from our lady readers, giving us the history of their summer labors in the cultivation of nature's beauties, gives us unmeasured pleasure. The success has more than equalled our expectations, and the knowledge that we have done a little to increase the love of flowers — to improve the taste, and increase the happiness of our fair friends, well repays us for all trouble and expense. Who could read such remarks as the following, with which a lady in Woodville, Jefferson county, N. Y., closes a letter, without feeling a little pride, and a great deal of pleasure, in knowing that he had done something, no matter how little, to bring brightness to the eyes, smiles to the cheeks, and joy to the hearts, of these little ones: "I have some dear little neices that I have the care of, that love the flowers dearly. They wish to know if I am writing to the kind gentleman who sent us the flower seeds. They wish me to say they had a fine bed of flowers this year, and they have saved a fine lot of seeds for themselves and for other people." Children are home flowers — they always love their mates, the flowers of the field.

Miss E. W. J., of Jefferson county, N. Y., as will be seen by the following extract, has failed to raise good balsams from the seed we sent:

> "The Balsams which I received were not double, which was rather a disappointment, but some young friends in this vicinity, that received seed from you, had them of all kinds and colors, as double as a rose."

M. Hutchings, of Charlotte, Michigan, has succeeded well.

> "The Balsams answered my highest expectations; some of them were almost as large, and quite as double, as the rose."

When we made the proposition to give packages of Flower Seeds, we had a collection on hand that we knew to be fine; but the demand was so large that our supply was soon exhausted, and not being willing to disappoint any, we procured from the most reputable sources at our command, a further supply. We regretted, on trial of this seed, *ourselves*, that it did not prove as fine as we were led to hope. This was probably the cause of the difference. The balsam loves a rich, and rather moist soil, and fine bloom must not be expected on a puny, starved plant. We are confident that the beauty of the flower depends much on good culture in the early growth of the plant. There is another point, also, to be considered, and the following extract of a letter from Mrs. E. A. Freeman, of Wayne county, touches the question directly:

> "I have raised one scarlet Balsam much resembling the specimen given in the October number of the Farmer, but am fearful that I shall not have them as beautiful another year, for the most perfect blossoms fell off without producing seed. And now I would ask, can you always depend upon the seeds, even when carefully selected, producing the same perfect blossoms, as such has not been my experience; for several seasons they would invariably be different, both in form and color, and a friend remarks that he has met with the same failure."

The most perfectly double flowers will not bear seed, the seed bearing qualities of the flower being sacrificed to its beauty. Consequently we have to depend on inferior flowers for seed. If seed is saved from a single flower, growing in a bed with others beautifuly double, we are pretty sure of getting a fine collection next season, perhaps not like any particular flower in the bed, but partaking of the fine qualities of several. Or, you may have some almost perfect specimens of last year's flowers, while others will be as single as the parent flower. If, however, this single plant grows alone, it will not vary much in several years. The same is true of *Ten week Stocks*, the double flowers bearing no seed.

A. S. W., of Rutland, N. Y., after a detailed account of her success, says:

> "Of Phlox Drummondii, I have seven shades. It seems to strike the attention of every beholder. They are all very fine sorts. I am very much pleased with them, and please accept my warmest thanks. Your flowers have helped to add to the happiness of one who is a stranger to health. I feel that I can learn many lessons from flowers, and may I, with all the lovers of flowers, learn to love Him who is the author of such beauties."

We must beg to be excused for showing a little vanity, by publishing the extract below of a letter received from Miss H. C. B., of East Avon, N. Y. We should like to see the editor who, with such an interesting document before him, written in a beautiful feminine hand, would have the good sense to keep it to himself. For ourselves, we like to give all an opportunity to participate in our pleasure.

> "Allow me to express my gratitude for the benefits conveyed by reading your good paper. It has been a visitor at my father's house from "time immemorial" in my past history, and I find it no less useful to farmers' daughters than to farmers themselves. To those who wish to know more of the benevolent provisions of our kind Creator whether farmers or otherwise, it cannot fail to be read with interest. Though always fond of flowers, I am indebted to the Farmer for the desire which I have to exert myself in their cultivation, and for most of the knowledge I possess upon the subject. I am assured that by turning ones attention assiduously to it, one may not only improve and establish their health, but procure an actual blessing for themselves and others. Henceforth I intend to make gardening one of my regular pursuits, improving all of the facilities within my reach."

We have urged the ladies to cultivate flowers. We have promised them, as a reward, increased health and happiness—a love of beauty in the soul, and beauty, worthy of their love, in smiling flowers, and a pleasant home. We have endeavored to furnish means, as much as in our power, to gratify this taste, with little cost or trouble to our friends; and it is no mean pleasure to know that we have not labored unthanked, or unrewarded by kind and approving words. The success of the past will excite us to increased exertions for the promotion of rural taste, and if the wilderness does not "blossom as the rose" before long, it shall not be laid to our charge. Our enlarged paper, for the coming year, (1852,) will give us increased facilities, which we shall not be slow to improve.

We will furnish to the wife or daughter of every subscriber who may apply for the same, by letter or otherwise, a package of choice annual flower seeds of from twelve to eighteen varieties. The applications will be filed, and the seeds sent as soon as some seeds we are importing, to make up our collection, shall arrive. We shall give engravings in the Farmer, during the year, of most of the flowers, seeds of which we may send, so that applicants may know what to expect. All we ask in return is, that the ladies should introduce us to their friends, if they think us worthy of such attention.

Editor's Table.

With the present number our volume for 1851 is closed. Every number we hope has reached every subscriber, and has been carefully preserved for binding. Few of our readers, who thus preserve them, would be willing to part with their old numbers for their original cost. If any one has lost numbers, or through any cause failed to receive them, it will afford us pleasure to supply them without charge. We take the utmost care in mailing the Farmer, but in sending through the mail 480,000 numbers during the year, it would be surprising if no accident should occur to prevent some of this large number reaching their destination. All we can do is to send again in case of failure, which we are always willing to do.

That we have succeeded in making the Farmer, the present year, what it should be, we can hardly hope, but we feel confident that we have furnished each subscriber with a paper of four times the value of the few shillings it cost him. Our *illustrations* have not been given merely for pictures, but for illustration, intended to throw light on the subject discussed, and many of them have been costly, and from original designs. It is not to be supposed that all the communications we publish contain reliable information, on which the farmer should risk much. But, in these articles, facts are presented to the farmer's consideration, and inferences drawn from these facts. These inferences the farmer can discuss with his wife, his sons, and daughters, and neighbors. Thus light is obtained, and the theory is confirmed or rejected.

The next Volume, which will commence on the *First of January*, but which we shall have ready for delivery a week or two previous, we shall enlarge by the addition of Eight more pages, and shall otherwise materially improve the appearance of our journal, and if we are not altogether disappointed in our calculations, the Genesee Farmer for 1852 will be the most beautiful Agricultural paper printed in America.

Although we have published the Farmer for many years, we have not yet heard of the man who thought he expended his money foolishly in subscribing for the Genesee Farmer. This being the case, we confidently hope to retain all our old subscribers another year, and to make a still farther increase. To do this we depend upon the voluntary exertions of our friends everywhere. We have no paid agents, and intend to have none. Instead of paying agents a commission, as is common, we prefer to give our paper to the farmer at the very lowest price, and but for our exceedingly large circulation, each volume would cost us more than the club price. The increased size of our Journal will enable us to add interest to every department, and we shall give every month a page of extracts from the best European Agricultural Journals.

To our friends who have voluntarily acted as agents the past year, we return our thanks. We acknowledge our indebtedness, and feel anxious to increase it another year. We hope none of our friends will be satisfied to forward a less number for 1852 than for '51.

* * *

Western New York Agricultural Society.—The subject of organizing a Western New York Agricultural Society is being pretty freely discussed at the present time, and the opinions we have heard expressed are favorable to the movement. We presume a call for a meeting of the agriculturists of Western New York, to discuss this question, and to organize the Society if it should be deemed expedient to form one, will be issued in a few days.

* * *

Advertisements, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance.*

The "Prepared Guano" Fraud.—The evidence of fraud in the "*Prepared Guano*" business is thickening—growing darker and darker, and blacker and blacker. A gentleman well known to the agricultural world as an author of repute, and who states that through misrepresentations he was induced to engage in the manufacture of the worthless article, writes us Nov. 5th:

"The article is not worth drawing two miles, if it could be had *gratis*. I found out that to make money by the business would be by deception, and I sold out after having been in the business only three months. I know what *every* article is in the compound, as I bought everything *myself*. You were right in your calculations. The Gas house *did* furnish about *one-half*—the *commons* the other. The actual cost was only *six cents* per barrel!"

How does this compare with the declaration of Mr. Kentish, that "*My prepared Guano does* NOT *contain an atom of anything from Gas Works, notwithstanding your coarse insinuations and assertions to the contrary.*" We hear nothing more of the libel suit, although we are quite prepared to prove all that we have said, and a great deal that we have not said. We are surprised that such a system of fraud should have been so long continued without the slightest notice from the agricultural press. If the Genesee Farmer had been published as near the seat of operations as some other agricultural papers, this fraud would have been exposed long ago.

* * *

Rural Homes, or Sketches of Houses suited to American Country Life; with original Plans, Designs, &c. By Gervase Wheeler. New York, Charles Scribner. Price $1.25.

A handsome book with about 300 pages, bearing the above title, has just appeared, and we acknowledge the receipt of a copy. We shall notice this work in our next, and give some extracts, with engravings.

Lessons in Modern Farming, or Agriculture for Schools, is a neat work of some 400 pages, received from the author, J. L. Blake, D. D. It is an excellent school reading book, and we recommend its use in our common schools. It might be read with profit in the family.

* * *

To those who Form Clubs for 1852.—We do not ask that all the members of a club should receive their papers at one office. We are willing to send to as many Post Offices as there are members of the club, if necessary for the convenience of subscribers. But where it is practicable, Post Masters would accommodate us by keeping a list of the subscribers at their office, and allowing us to send the whole number to their own address. This saves us the trouble of writing on all the papers. Many have done this the present year.

* * *

Agricultural Books and Libraries.—We refer all to our offer of Agricultural Books. We know of no better way in which a young man could obtain a few good agricultural books, than by obtaining subscribers to the Genesee Farmer. The winter months afford leisure, and the price of the Farmer is so low, and its merits so well appreciated, that few will refuse to subscribe if solicited. We will send specimen numbers and show bills to all who apply.

* * *

To our Canadian Friends.—We shall continue to furnish the Farmer to our Canadian subscribers free of American Postage. Some premiums due in Canada we have not forwarded, on account of complaints we have received of the high rates of postage. We can forward by express to almost any port in Canada, and will send by mail if desirable.

* * *

Monroe County Agricultural Society.—The Annual Meeting of the Monroe County Agricultural Society will be held at the City Hall, in Rochester, on the 14th day of December. A general attendance of members is requested.

James Vick, Jr., Secretary.

PROFESSOR NORTON, AND ANALYTICAL CHEMISTRY APPLIED TO AGRICULTURE.—No adult reader of Professor NORTON's letter and analysis of an article sold for manure, which appeared in our last, could fail to see the great value of the professional labors of that gentleman to the farming interest. It is not from a desise to benefit Prof. N. or his labomtory, that we recommend young men who have the means to attend at least one course of lectures on scientific agriculture, as delivered in Yale College. The advantage will be all on the side of the instructed party, not that of the able instructor. No future event is more certain than the certainty of their being in a few years a universal demand for *commercial manures*. In the preparation of these there is the strongest possible temptation to perpetrate fraud on the farming community. It has been a part of our professional duty to learn the fact by experience, that 500 lbs. of night-soil in its natural semi-liquid state, will not form over 100 of dry *poudrette* as it ought to be prepared; and hence, that a really valuable article can hardly be sold at a cent a pound. Suppose, however, that a dealer in fertilizing salts should make 200 lbs. of great strength and value, and divide the same between four excellent farmers and gentlemen of the highest character, for trial in different States. Of course "the salts" are found exceedingly valuable for wheat, corn, potatoes, and grass, and are truly certified to by the respective farmers who tried them on the crops named. On the strength of these certificates, Mr. B. sells to one thousand other farmers, a half ton to each, of what purports to be the same kind of "salts," which they buy as an experiment. The cost of 1000 lbs. being only $10, the seller gets $10,000 cash in hand, and the buyers get a mixture of swamp muck, lime, and very fine sand, worth much less than the freight home to the farm. These one thousand cheated cultivators will not be likely to put their heads into the lion's mouth a second time; but it will be an easy matter to procure *with a good article*, another batch of certificates, and to extract $10,000 next year from the pockets of another thousand farmers never before bitten in that way. *Science* is the only preventive of such frauds, and an independent Press to give it a faithful report for the protection of the farming interest, regardless of personal consequences.

* * *

MULTICAUL RYE.—DANIEL P. BIGELOW, of Barre Centre, left in our office some heads of rye of extraordinary size and beauty, measuring eight and a half inches in length. The variety is known as the *Multicaul* Rye. It was received from the Patent Office by a gentleman in Vermont. It was treated according to the directions accompanying it, which were as follows:

"Sow in the month of August, or sooner, and as soon as it gets up and well started, turn on your stock and pasture it during the fall, and again in the spring, until the first of May. It being necessary to pasture until late in the spring, otherwise it grows too tall."

Mr. B. says: "It was recommended to yield from forty to sixty bushels per acre, and I think it will bear the recommendation, as it yielded over forty bushels the present year."

* * *

COAL IN WESTERN PENNSYLVANIA.—On the line of the canal which extends from Beaver to Erie, there are strata of coal four feet in thickness, a specimen of which, analysed by Dr. JAMES R. CHILTON of New York, gave the following result:

Carbon,	90.043
Hydrogen,	4.620
Nitrogen,	2.917
Ash,	2.420
	100.000

This analysis shows the coal to be of an excellent quaity; and it is said to be not inferior to the celebrated Cannel coal of Scotland.

A CITY YOUTH IN LOVE WITH THE FARMER'S LIFE.—A young man in New York city, who has taken the Genesee Farmer for a number of years, and paid for several years yet in advance, wishes to become a farmer. He has studied the theory of farming, and now wishes to engage with some practical farmer, so that he may learn to unite theory with practice. But we give his own story in his own words. He writes us:

"I believe that farming, to be profitable, requires much headwork as well as manual labor. And why should it not? There is no business, in my humble estimation, to which so little *mind* has been applied. A business that will support so many who appear to make so little use of their heads, ought to richly pay one who makes a good use of his mental faculties.

"I have endeavored to learn the theory of agriculture by every means in my power, having a library of from fifty to sixty volumes on various agricultural subjects. Perhaps you say I may have a library, but that I may not read and study its contents, therefore what is the use of my having one? But I *read* my books, and try not only to read but to *remember*, for it is not what we read but what we remember that benefits us. I also take four agricultural papers, three of which are published in this State, and one in Ohio. I subscribed to your excellent journal in 1850, for five years. Thus you will see that I have done all that I could to prepare myself for a farmer's life. Being unacquainted with any farmer to whom I might apply, I concluded that the only way by which I could obtain a situation on a farm, was to presume so far on your kindness as to ask you if you would be willing to get one with some *good* farmer for me."

Any farmer wishing to lend an enterprising young man a helping hand, may correspond with us and we will furnish his address. We have given some of our own experience in the pursuit of agricultural knowledge, in another page.

* * *

MANURES—ANIMAL, VEGETABLE, AND MINERAL.—Mr. LEVI BARTLETT, of Warner, N. H., is writing a series of articles on manures, which are printed in the Boston Journal of Agriculture. He gives great prominence to the experiments of Prof. WAY, which go to show that salts of ammonia are decomposed in clay soils and the base (ammonia) retained in combination with alumina in an *insoluble* condition. It seems not to have occurred to Mr. BARTLETT nor to Mr. WAY, that if rain water does not dissolve this new compound of ammonia, as they allege, then it can not possibly enter the roots of plants to nourish them. Their theory proves too much in denying the solubility of ammonia in any form. To be of any value as food for growing vegetables, it must be either a soluble gas or a soluble salt to pass through the cell walls and capilliary tubes of plants. Crenic and apocrenic acids found in spring and river water doubtless derive their nitrogen from ammonia and decaying vegetables dissolved out of soils. Alumina has a strong affinity for ammonia, but not to the extent claimed.

* * *

WHITE AUSTRALIAN WHEAT.—Mr. DAVISON, from whom we procured the Australian Wheat of which drawings are given in this number, writes us: "I have raised from 5 grains 65 heads—averaging 13 heads to each grain; these 65 heads produced 9 ounces of clean wheat, averaging 97 grains to each head—making in all 6305. This wheat does not grow taller than our common wheat, but the stalk is uncommonly stout, and with me has shown no appearance of rust. I like this wheat much, and have sent some to my son in Bedford county, Virginia, for trial there."

* * *

A FRIEND writes that he wishes to purchase a farm contiguous to railroad, containing two or three hundred acres, for the purpose of raising and and fatting South Down sheep. Persons having such to dispose of, may communicate with us, or Z. B. WAKEMAN, Rockton, Herkimer Co., N. Y.

THE occupying of so much room by index, &c., crowds out much other matter prepared for this number.

From the London Correspondent of the Buffalo Com. Advertiser.

CLOSE OF THE GREAT EXHIBITION.

London, Oct. 17, 1851.

The Exhibition closed *pra forma* on Wednesday. The Prince and Royal Commissioners went through the dumb show of delivering and receiving the awards in gross. The Bishop of London made an inaudible prayer. An anthem was sung, and one verse of "God Save the Queen." From daylight to dark the heavens poured down the rain in torrents. There was something in the appearance of Albert and the Commissioners which cast a damper upon the whole audience—there was throughout a feeling of apprehension that something diabolical and outrageous was in the future. This feeling was fed by the article of the Times that morning intimating what might be expected when the awards should appear. So strong was the consciousness of the Prince and Royal Commissioners that they were about to do a mean and dastardly act in the face of the world, that manifested itself in their countenances and actions, while in the audience it produced a sullen silence, and the whole passed off more like a funeral ceremony than the closing of a great *fete*.

Yesterday's Times presented the list of awards, and so different were they, in numberless cases, from what had been known to be the decisions of the jurors, that it was clear that those decisions had undergone a garbling and tampering by the *Council of Chairmen*. This Council of Chairmen, it must be borne in mind, were the Chairmen of the several juries, and were all *Englishmen*. After the juries made their Reports, it was found that we were decidedly ahead of all the world in the *new and useful*, and if the original programme was adhered to, we would have a large proportion of the first or great medals, which would be very few in number at best. Early in the proceedings a change was made—a wider range was made to first medals. Even after the report of the juries, the Council of Chairmen virtually set aside the entire action of the juries, altering and transposing so as to (as the Times said) "take away the distinction likely to attach to the great medal." By the published awards this has been done effectually, for it has been given to things entirely below such distinction, while very important—in fact, a greater number of the most important things have only prize medals, while the majority of things having first medals, are below mediocrity in class, and out of the proposed range of first medals entirely, as for instance: the first medal named in the whole list was a council medal, for a "process of washing coals." The first great medal to the United States is in class 3d, to Borden Gail, Jr., for the preparation called *Meat Biscuit*. "To John Pean & Son, of the United Kingdom of Great Britain, a large medal for two pair of Steam Engines of a compactness for small vessels." A large medal is awarded to David Dick, of Pennsylvania, for his "Anti-Friction Press." But a similar medal in the same class is given to Hibbet & Sons, of England, for a display of cotton machinery, so that the greatest inventions of foreigners are put against collections of old machinery by Englishmen. So in the 10th class, St. John's (American) Self-Determining Variation Compass after having been reported favorably upon by the 8th class and 10th class, and also Burt's (American) Solar Compass, have received prize medals equal to that of A. D. Rocher, for exhibiting a balance made in the government workshop at Washington. About ten English, and a dozen European, gun workers have prize medals, in all cases for workmanship at best, while Colt is unnoticed. Then Hobbs, who has picked all their locks, has his lock, which has *defied* them all, put upon the same footing, a prize medal. Our Prouty and Mears' plows, although they have beaten in every contest, are awarded prize medals, while a large medal is given to an English plow. And the American churn, although it beat all others, is dropped alongside of an English and Belgian churn which it beat. The fact is, our greatest inventions, our best works of art, and genius, and industry, have, by the award, been placed on a par with a pot of pickled peaches, and a Scotch snuff box of wood, cartloads of which can be bought in the stores at eighteen pence each. The list of awards seem to have been prepared especially to throw us as much in the shade as possible. An honest and fair list of awards would have left England too far behind; they have therefore adopted the course likely to prevent distinction of merit as much as possible. They have smothered and covered us up by giving council medals, in nine cases out of ten, to the English and Europeans for things no way entitled to distinction, while, except Dick's Press, the council medals to the United States have been given as erroneously, and to the exclusion of more new and useful inventions, well entitled to such distinction; and I doubt not their recipients will view themselves as "being used" by the Council of Chairmen for their own purposes.

In short, we shall hold a meeting next week of the exhibitors here, and very likely we shall respectfully decline the honor intended us by the medals awarded. If that is not a unanimous vote of those now here, the great majority will send a letter to the Royal Commissioners, couched in proper language, declining theirs, and to which their respective signatures will be attached. It is generally felt here by the exhibitors, that it is a studied attempt to defraud the American exhibitors of their proper position before the world, which it is duty to resent in a proper and dignified manner. Whatever is done will be well counselled beforehand.

Our Commissioner, Mr. Riddell, who has been Commissioner, agent, exhibitor, owner, and a good while absent, is presenting the bills of exhibitors, which are very heavy, and continues to refuse to give any statement of his expenditures, so that our meeting, when held, will be to deal with not only our enemies, but our friends. One thing may be relied on, the whole will be attended to properly.

Sonsion.

LIST OF AWARDS TO UNITED STATES CONTRIBUTORS AT THE GREAT EXHIBITION OF ALL NATIONS.

Class I.—*Prize Medals*—Adirondac Manufacturing Company, New York, for steel and iron; Morris, Jones, & Company, for plate iron; New Jersey Exploring and Mining Co., for zinc ores, iron (Franklinite) ore, smelting process; Trenton Iron Co., for iron of fine quality, ores, &c.

Honorable Mentions—Adirondac Manufacturing Co., N. Y., for cast iron; Morrill, Stewart, & Co., for sheet iron; Morris, Jones, & Co., for boiler plate iron.

Class II.—*Council Medal*—Goel Borden, Jr., for preparation called meat biscuit.

Prize Medals—W. Barnes, maple sugar; T. Bell, soft wheat from Genesee; L. Dean, maple sugar; Dill & Mulchahey, Cavendish tobacco; J. H. Grant, do; P. Robinson, do.; C. Duffield, ham; Hecker & Brother, Genesee flour; E. T. Heriot, Carolina rice; B. B. Kirtland, collection of maize, 35 varieties; N. Y. State Ag. Society, collection of wheats; Raymond & Schuyler, flour, thirds; Schooley & Hough, ham, Cincinnati.

Honorable Mentions—John Bridge, oil cake; George Dominick, lard; Hecker & Brother, Farina; W. Hotchkiss, wheat; Lee & Co., oil cake; Mookler & Chiles, Cavendish tobacco; Tyler & Anderson, do.; James Thomas, do.; Thomas & Co., do.; Oswego Starch Factory, fecula of maize; M. White, Muscovada sugar.

Class III.—*Prize Medal*—Power & Weightman, chemicals.

Honorable Mention—Wetherill & brother, various salts.

Class IV.—*Prize Medals*—S. Bond, cotton; Cockerill, wool; W. Colegate & Co., starch; J. Ewing, wool; H. Hampton, cotton; Geo. Hicks, tillandsia usnoides; G. L. Holmes, cotton; H. G. & L. Hotchkiss, oil of peppermint; J. R. Jones, cotton; J. V. Jones, cotton; A. M. Rimber & Co., wool; W. W. Macleod, cotton; the State of Maryland, collection of products; J. B. Merriewether, cotton; Perkins & Brown, wool; J. Pope, cotton; W. Seabrook, cotton; Rev. Z. Thompson, woods; J. Naller, cotton; Oswego Starch Factory, starch.

Honorable Mentions—E. R. Dix, hemp, flax guano; G. Dominick, lard oil; E. Ecuchtwanger, bleached shellac; F. Frank, lard oil; L. Goddard, whalebone; Holbrook & Stanley, lard oil; F. O. Ketteridge, corn-husk fibre; B. J. Pell, woods; Truesdale, Jacobs, & Co., cotton.

Class V, (a)—*Prize Medals*—C. Childs, for slide top buggy or phaeton, enamelled apron of leather of very superior quality. The whole well got up and neatly finished; G. W. Watson, for a sporting wagon, very neatly finished in all respects.

Class VI.—*Council Medal*—D. Dick, various engineer's tools and presses.

Prize Medals—Blodgett & Lerow, sewing machine; T. K. Earl & Co., card clothing; W. Hapden, drawing regulator for cotton; Lowell Machine Shopp, self-acting lathe and a power loom; C. Starr, bookbinding machine; J. P. Woodbury, wood planing, tonguing and grooving machine.

Class VII.—*Prize Medal*—Iron Bridge Manufactory, New York, model for Ryder's patent iron bridge.

Class VIII.—*Prize Medals*—National Institution of Washington, models of ships of war and large merchant vessels; J. R St. John, nautical compass, purporting to show the presence of any disturbing forces upon the needle, and also to show the amount of the deflection resulting from these causes.

Honorable Mentions—Samuel Colt, revolving rifles and pistols; W. R. Palmer, target rifles; Robbins & Lawrence, military rifles.

Class IX.—*Council Medal*—C. H McCormick, reaping machine.

Prize Medal—Prouty & Mears, plow.

Class X.—*Council Medal*—William Bond & Son, invention of a new mode of observing astronomical phenomena, &c.

Prize Medals—A. D. Bache, balance; M. B. Brady, daguerreotypes; W. A Burt, solar compass, surveying instruments; J Ericsson, sea-lead, promoter, &c.; M. M. Lawrence, daguerreotypes; John R. St. John, detector compass; J. A. Whipple, daguerreotype of the moon.

Honorable Mention—J. E. Mayell, photographs.

Class X. (a)—*Prize Medals*—J. Chickering, a square piano forte, and the jury think highly of his grand piano forte; C. H. Eisenbrant, clarionets and flutes; G. Gemunder, for a Joseph Guarnerius violin (chiefly.) and for three other violins and a viola; C. Meyer, two piano fortes; R. Nunns & Clark, seven-octave square piano forte

Honorable Mentions—Gilbert & Co., piano forte with Æolian attachment; C. Goodyear, successful application of a new material (India rubber) for the manufacture of a flute; G. Hews, patent piano forte.

Money award—J. S. Wood, expenses incurred in constructing his piano violin, £50.

Class XI.—*Prize Medals*—Amoskeag Manufacturing Co., assortment of drillings, tickings, sheetings, and cotton flannel; Williamantic Duck Manufacturing Co, cotton sail cloth

Class XII.—*Prize Medal*—Gilbert & Steven, flannels exhibited by Johnson, Lewell, & Co.

Honorable Mention.—P. T. & D. Holden, blankets.

Class XV.—*Prize Medals*—Lawrence, Stone, & Co., tartans made from native wool.

XVI.—*Prize Medals*—B. Baker, light harness of superior workmanship; H. M. Crawford, calf skins tanned in oak bark; Hickey & Tull, two portmanteaus; Lacy & Phillips, case of harness; Wisdom Russell & Whitman, specimens of curled hair, for furniture.

Honorable Mention—H. Adams, for a portable saddle.

Class XVII.—*Prize Medals*—J. K. Henrick, for superior ruling of account books; S. G. Howe, for a system of characters, slightly angular in form, without capitals, for the blind.

Honorable Mentions.—Bradley, Bond, & Co., for book cloth binding and block gilding; H. Gassett, far superior ruling of account books; J. & W. McAdams, for ruled account books and circular ruling; Libell & Mott, for specimens of account books; C. Starr, for binding works for the blind, with thickened margins, to prevent the embossing from being pressed out; E. Walker & Co., for a bible elaborately bound and ornamented, with a recess for a family register inside the cover.

Class XIX.—*Prize Medal*—Albro & Hoyt, for floor cloth.

Honorable Mention—A. & A. Lawrence & Co., for carpet.

Class XX.—*Prize Medals*—W. H. Addington, for shoes for mining purposes; Mrs. W. Haight, for shirt; the workman of W. H. Jeffers, for ladies' boots shoes (honorable mention to exhibition.)

Honorable Mentions.—N. A. Breed & Co., for children's shoes; W. H. Jeffers, for collection of boots and shoes (prize medal to the workman;) Millard & Sons, for bonnets made of cotton braid.

Class XXI.—*Prize Medals*—Brown & Wells, for tools; North Wayne Scythe Co., for scythes; D. Simmonds & Co, for edge tools.

Honorable Mention—A. B Allen & Co., for tools.

Class XXII.—*Prize Medals*—Adam & Co., for bank lock; G. A. Arronworth, for permutation locks; Chilson, Richardson, & Co., for hot air furnaces; Cornelius & Co, for Chandeliers; Day & Newell, parautoptic permutating locks (with special approbation.) S. C. Herring, for salamander safe; C. Howland, for bell telegraph; McGregor & Lee, for bank lock.

Honorable Mention—Pond & Co., for cooking stoves.

Class XXIII.—*Prize Med.*—Brooklyn Flint Glass Co, flint glass.

Class XXIV.—*Honorable Mention*—W. Ragan, for mechanical reclining chair.

Class XXVII.—*Honorable Mentions*—Maryland Soap-stone Co for articles made of soap-stone; Sall & Mear, for water vase of fine brick clay.

Class XXVIII.—*Council Medal*—Goodyear, for India rubber.

Prize Medals—J. Feen, for comb; Hayward Rubber Co, for India rubber shoes; G. Loring, for water pail; S. C. Moultan, for India rubber goods; Bratt, Julius, & Co., for Ivory veneer.

Class XXIX.—*Prize Medals*—Bazin, Xavier, & Co., for fancy soaps; J. Hauel, for toilet soaps; M. J. Louderback, for preserved peaches; State of Maryland, for collection of produce; J. R. St. John, for soap; H. P. & W. C. Taylor, for toilet soap.

Class XXX.—*Prize Medal*—Hiram Power's statue of a Greek Slave, in marble.

ANDRE LEROY,

NURSERYMAN, AT ANGERS, FRANCE,

RETURNS his thanks for past favors, and begs leave to inform his friends and the public in general, that his catalogue for 1851 is now ready, and may be had on application to his agent, Mr. E. Bossange, 138 Pearl street, New York. He offers for sale a large collection of the finest forest, fruit, and ornamental trees of all kinds, shrubs, &c., &c. The superior quality of his trees is already known in the United States, and the experience he has in packing up trees to be sent abroad, gives him a noted advantage over all other nurserymen. Orders should be sent early, as, although his nursery is the largest in France, the number of some new kinds of trees are limited, and some of the last orders sent last year could not be executed. The terms, prices, charges, and all desired information will be found in his catalogue. The trees will be shipped to the care of his agent in New York, who will attend to the receiving and forwarding. For further particulars, and for the catalogue, apply to

E. BOSSANGE, 138 Pearl street, New York.

☞ Agricultural papers will please insert the above three times and send the bill and a copy of each paper to E. Bossange.

Nov. 1, 1851. [11-3t]

FOWLS FOR SALE.—A few fine Shanghae and Cochin China Fowls for sale—pure and fine—at $5 00 per pair, shipped to order. Address CHARLES SEELYE, Genesee Farmer Office, Rochester, N. Y.

BOOKS ON AGRICULTURE, &c., &c.,

For sale at the Office of the Farmer, and offered as Premiums.

THE Publisher of the Farmer keeps constantly on hand a large assortment of the most popular and valuable works pertaining to Agriculture, Horticulture, and Rural and Domestic Economy, which will be sold at the lowest cash prices. The names and prices of a portion of the books are annexed:

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Gardner's Farmer's Dictionary. $1.50.
Home Doctor. 25 cents.
Horse Doctor. 25 cents.
Horse's Foot—and how to keep it sound. 25 cents.
Johnston's Agricultural Chemistry. $1 25.
Johnston's Lectures on Practical Agriculture. 75 cents.
Johnson's Dictionary of Gardening. $1.75.
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Ladies' Companion to the Flower Garden. $1.25.
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Loudon's Ladies' Flower Garden $1 25.
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Miner's Bee-Keeper's Manual. $1.
Norton's Elements of Scientific Agriculture. 50 cents.
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Poultry Book, by Dixon & Kerr. $1.25.
Rural Economy, by Boussingault. $1.25.
Rural Homes. $1.25.
Scientific Agriculture, by Rodgers. 75 cents
Stable Economy, by Stewart. $1.
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Palmyra, May, 1851. [5-8t]

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Genesee Farmer for 1852.

Libraries offered to County Agricultural Societies, and to Individuals.

The present number is the last of the volume. The unparalleled increase of our circulation the present year induces us greatly to improve the next volume. It will be printed on NEW TYPE, BETTER PAPER, illustrated with MORE COSTLY ENGRAVINGS, and be larger than at present, each number containing THIRTY-TWO instead of TWENTY-FOUR pages, without any increase of price. Let all examine our offer of Books to those who obtain subscribers for the Farmer, as well as to Counties where the greatest number is taken. Our friends will please form clubs early.

PREMIUMS FOR 1852!

During the year 1851 the editors of the Genesee Farmer have circulated in premiums over Seven Hundred Dollars worth of the best agricultural books published in the country. These works, on *Agricultural Chemistry*, *Geology*, *Botany*, *Horticulture*, *Gardening*, *Rural Architecture*, *Farm Economy*, *the Management of Sheep*, *Horses*, *&c.*, *the Treatment of Diseased Animals*, *&c.*, scattered all over the country, even to Oregon and California, we believe, have exerted, and will continue to exert, a very beneficial influence. Their influence is not confined to those who receive them, but is felt by their children, their friends, and neighbors. They must increase the knowledge, and consequently the power, the influence, and the wealth of those for whose especial benefit we labor. The coming year it is our intention to increase the circulation of these works. We do this for the good they accomplish, as well as a slight compensation, to our friends — the friends of rural improvement — and Postmasters, throughout the country, who are acting as voluntary agents without the expectation of pecuniary reward. With a view, therefore, to this object, and to extend the circulation and increase the usefulness of the Genesee Farmer, we offer the following liberal premiums to the friends of Rural Improvement who may interest themselves in obtaining subscribers.

Premiums to Individuals.

1st. THIRTY Dollars, in Agricultural Books, to the person who shall send us the largest number of subscribers, at the club prices, before the 15th day of April next, so that we may announce the successful competitors in the May number.

2d. TWENTY Dollars, in Agricultural Books, to the person who shall send us the second highest list, as above.

3d. TEN Dollars, in Agricultural Books, to the person who shall send us the third highest list, as above.

In order to make the circulation of the books more general, and to reward *every one* of the friends of the Farmer for their exertions in its behalf, we will give to those not entitled to any of the above premiums, the following books, *free of postage*, or papers, as desired:

1st. To every person who sends us Sixteen subscribers, at our club terms of *three shillings each*, one extra copy of the Farmer.

2d. To every person sending us Twenty-Four subscribers, as above, any agricultural work valued at 50 cents, *postage paid*, or two extra copies of the Farmer.

3d. To any person ordering Thirty-Two copies of the Farmer, any Agricultural Book valued at 75 cents, *postage paid*, or three extra copies of the Farmer

4th. For Forty, any Agricultural Book valued at $1, *postage paid*, or four extra copies of the Farmer.

5th. For Forty-Eight, any Agricultural Book valued at $1.25, *postage paid*, or five extra copies of the Farmer.

For larger numbers, books or papers given in the same proportion.

☞ To save expense to our friends, we pay the postage on all these works, and persons entitled will state whether they wish books or extra papers, and make their selections when they send orders; or if their list is not complete, if wished we will delay sending until the club is full.

County Premiums.

To aid as much as possible in establishing County Agricultural Libraries, we offer the following premiums, which we hope will aid in the more general establishment of Agricultural Libraries in the Counties.

1st. We will give an Agricultural Library worth FORTY DOLLARS, to the County in which the greatest number of copies of the Genesee Farmer is taken by the 15th of April next. This Library to be kept as a County Agricultural Library under the care of the Agricultural Society.

2d. To the County in which the next greatest number is taken, an Agricultural Library worth TWENTY-FIVE DOLLARS, on the same conditions as above.

As the above premiums will probably be taken in the State of New York, and as we wish to give our friends in other States an equal chance in the competition, we offer the same premiums to Counties OUT OF THE STATE OF NEW YORK, thus:

1st. To the County out of the State of N. York in which the greatest number of copies of our paper is taken, an Agricultural Library worth FORTY DOLLARS.

2d. To the County out of the State of New York in which the second greatest number is taken, an Agricultural Library worth TWENTY-FIVE DOLLARS.

Individuals will receive the premiums to which they may be entitled, for their individual benefit, as a compensation for their personal exertions, and the numbers they send will be credited to the Counties where the papers are sent, so that the premiums to individuals will not at all interfere with the County premiums.

BACK VOLUMES of the Farmer will be furnished, if desired, and counted the same as new subscribers.

We shall keep a correct account of the subscribers sent by each person and county. In the May number we shall announce the premiums.

Libraries and *Books* will be forwarded per order, immediately after the announcement, and persons or societies can select their own books, or leave the selection to us.

☞ Specimen numbers, show-bills, &c., sent to all post-paid applicants. All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at our risk.

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THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, Fruits, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, Jr., Editors.

P. BARRY, Conductor of Horticultural Department.

In issuing a Prospectus for the Thirteenth Volume of the Genesee Farmer, the Publisher flatters himself that it is too widely known, too extensively circulated, and too well read, to render it necessary to state at length the design of the work.— Those who read the Farmer are the best judges of its value, and those unacquainted with it are requested to examine its pages.

The unparalleled increase of our circulation, the present year, from TWENTY to FORTY THOUSAND, has induced us to enlarge and further improve our Journal, and for the year 1852 we shall furnish a paper that for size, beauty, and ability, will not be excelled in this country.

The new volume will commence on the first of January. It will be printed on ENTIRELY NEW TYPE and SUPERIOR PAPER, and be ONE-THIRD LARGER than at present, containing TRIRTY-TWO instead of TWENTY-FOUR PAGES, and making a volume of 384 pages, (with title page, index, &c., suitable for binding,) at the close of the year. Our increasing circulation warrants us in making this change without any addition to the price. The volume will be APPROPRIATELY ILLUSTRATED — containing numerous and expensive engravings of Farm Buildings, Improved Implements, Domestic Animals, choice Fruits, Flowers, Shrubs, &c.

We number among our Contributors, hundreds of the best Practical Farmers in the country, and our readers have through our pages, the benefit of their wisdom and experience. No thinking man can read any number we issue, without receiving some useful hint in regard to the management of crops, stock, or the orchard, of more value than the price of the volume. The Genesee Farmer is by far the cheapest Agricultural Journal published in America. Our FORTY THOUSAND SUBSCRIBERS place us ahead of all other Agricultural Journals, and enables us to furnish a paper for the trifling sum of *Three or Four Shillings*, equal to any, both in value and beauty.

An earnest advocate of improvement of both the Mind and the Soil, the Farmer seeks to advance the rural interests of the country, and elevate the profession of Agriculture to its proper position. To accomplish this, it has labored long and faithfully, and not without some success. Its position as the CHEAPEST, and at least one of the BEST AGRICULTURAL JOURNALS in the country, is fully established, and we confidently ask for it that support which it merits from the Farmers, Gardeners, and Fruit Culturists of the United States. We invite all who feel the importance of sustaining this work, and extending its usefulness, not only to subscribe themselves, but to introduce it to the patronage of their friends.

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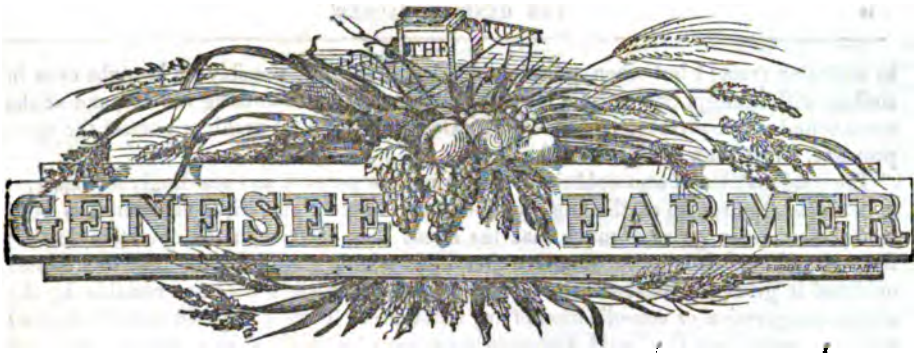
Rochester, New York

November, 1851.



THE GENESEE FARMER

VOL. XIII. ROCHESTER, N. Y., JANUARY, 1852. No. I.

AGRICULTURAL CHEMISTRY.

THE winter months are particularly favorable to reading and study, and every farmer should endeavor to master some of the principles of agriculture, which the rapid progress of science renders intelligible, and the press and the public mail have dropped into his hands. Chemistry has, confessedly, done more than any other science to place the cultivation of the earth on a safe and enduring basis; and to it agriculturists in all civilized and enlightened nations are now looking for still more important discoveries, and more valuable aid in the prosecution of their noble art. The husbandman is not expected to be deeply learned in the technicalities of any natural science; and in treating of them for his perusal, one should be careful to avoid, so far as he may be able, the use of strictly professional terms. This we shall do, and when they occur, a plain deffinition will be given.

Chemists have found reason to believe that all matter, without exception, is endowed by its Creator with an ever-active *force* which tends to the formation of compound bodies. What are called chemical affinity, attraction of cohesion, and gravitation, are so many visible manifestations of this natural power. A knowledge of the laws regulating this force, as they affect all the elements of soils and their vegetable and animal products, may be regarded as the Science of Agricultural Chemistry.

When iron is exposed in a damp atmosphere, it *rusts;* and the observer witnesses a common but highly interesting phenomenon. There evidently exist forces in the atoms of the metal and those of oxygen, in the water or atmosphere, which cause these gaseous and solid bodies to unite and form a permanent compound of vital air and a metal called the red oxide, or per-oxide of iron. By this union of unlike atoms their respective forces are not annihilated, but are *quiescent*, and will be active and ready to act again so soon as heat or any other disturbing element shall separate the oxygen from its *base.* It is important in the study of natural laws, to keep in mind the fact that a force may be at *rest* and not lose its existence. It would be idle to speculate in what form a quiescent force exists; for we really know nothing of the ultimate atoms of matter itself, and need not attempt to fathom the mystery of gravitation, or of any inherent force displayed by the *molecules* of the material world. Suffice it to say in this connection, that matter organized in the tissues and vessels of living plants and animals, is not deprived of the natural forces which characterize it when wholly disorganized, and in the form of common air, water, and metals, or earths.

The development of latent or chemical forces in the elements of crops and soils, is a point to be well considered. Nothing that the husbandman can do to impart activity and progress in those changes which prepare food for plants, is of more importance than *the minute subdivision of all solids to be operated upon.* To illustrate the fundamental principle of all tillage, it may be stated that a mass of iron shows but a slight tendency to oxidation (rust;) but when minutely divided, it can not possibly be brought even in contact with atmospheric air at a low temperature, without becoming *red hot*, and at the same time being converted into an oxide. Cobalt, nickel, and uranium possess the same property. (MULDER and MAGNUS.)

The condensation of atmospheric air in the minute pores of an exceedingly fine mineral is doubtless the source of this high temperature. Finely pulverized charcoal has been made to condense gases so much that the latent heat evolved in the operation has set the coal on fire. It is a law of nature that when a body passes from a rarer to a denser medium it gives out heat—*i. e.*, heat which was insensible becomes sensible by the simple compression or consolidation of any substance. Thus, when cold water is applied to cold caustic lime, the liquid becomes incorporated with the lime in a solid form and gives up a portion of its latent caloric, or heat of fluidity. In a similar manner freezing water in a cellar, which without the water would freeze potatoes and apples, warms it sufficiently to prevent their congelation. In this instance the sensible heat is given off from the water when transformed into solid ice. When vapor and water are converted into snow in winter, they warm the air sensibly, which elevation of temperature lasts a day or so after the fall of a deep snow. On the other hand, the expansion of water in the process of evaporation absorbs active or sensible heat, and generates cold as it renders heat quite insensible. This law is too familiar to need illustration. Heat and cold are among the most effective chemical and mechanical agents, and their influences on all bodies to expand or contract their dimensions, as well as the peculiar functions of solar light, deserve the closest study.

If a large crystal of salt or sugar be crushed into one impalpable powder, its solution in water is greatly promoted. This fact illustrates a general law, and one that prompts the grinding of much grain, the pulverization of the soil, and about half the labor of the agriculturist. No solid food of animals can pass through the walls of the intestines into the *lacteals* (milk-ducts) and the blood vessels, which is not substantially dissolved in the gastric juices; nor can cultivated, or other plants, subsist on insoluble earthy atoms. Hence, all the circumstances that favor or retard the solution of bodies in tilled land, or living systems, have a high practical value, and a scientific claim to attention. Bodies in solution are in a very favorable condition for the play of chemical forces, whatever they may be. The chemical phenomena witnessed in the cells of plants, in the production of wood, starch, gum, sugar, oil, albumen, casein, and gluten, appear to be governed more by physical than any known vital laws. The further the chemistry of vegetable and animal physiology is extended, the greater becomes human power over all the phenomena of life. We have long believed, and taught, the doctrine, that defective nutrition, and most diseases, from our simple liver-complaints and chills and fever, to the yellow fever, cholera, and plague, arise from the violation of laws which chemistry would yet fully elucidate and prevent. Even scrofula and consumption are now cured by phosphate of lime (bone earth) prescribed on strictly chemical principles, or pathology. The following are cases in point:

"In the first number of the New Orleans Monthly Medical Register, we find an article by Professor STONE, on the virtues of 'Phosphate of Lime in Scrofula and other depraved states of the System,' which is of some moment. It was suggested by an Essay in the London Lancet, on the 'physiology and pathology of the oxalate and phosphate of lime, and their relation to the formation of cells.'"

" 'The conclusions of the author,' says Professor STONE, 'are based upon careful chemical research and results from the use of the remedy. His researches show that in man, as well as in vegetables and inferior animals, phosphate of lime, as well as albumen and fat, is absolutely essential for the formation of cells, and he considers that many of the pathological states of the system depend upon a deficiency of this salt. The affections in which it is advised are ulcerations dependant upon a general dyscrasia, and not a mere local affection; infantile atrophy, in those suffering from rickets and consequent diarrhœa and tuberculous diseases, particularly of the lungs in the early stages.'

"Struck by this article, Prof. STONE tested it, and he thus describes three cases in which its virtues were very obvious. The first was that of a slave who was admitted to the Professor's Infirmary in

July, with a disease of the nose, the whole system showing great progress in scrofulous decay. The usual remedies were unsuccessfully applied until August, when cod liver oil was used, but the disorganization of the stomach was increased by it. The phosphate of lime was then applied, eight grains three times a day. Its good effects were soon apparent. It and the oil were therefore administered together, and the patient soon was restored to health.

"The second case is that of a young lady aged 24. Her disease was one of 'unmixed phthisis,' which might have been expected to terminate in the course of a few months fatally. The upper part of both her lungs was filled with tubercles, and in some places were beginning to soften. The case was evidently a bad one. The treatment of cod liver oil was at first used, but without marked improvement. The phosphate of lime was then administered with the oil, and the result, as in the case of the negro, was soon apparent. The patient was rapidly getting well.

"The third case was that of a child seven years of age, in which the phosphate of lime was used with complete success.

"We can only refer briefly to these cases for the purpose of directing attention to this subject. Before the dreadful diseases which they describe, scientific men have stood abashed. That there is some remedy for them we can hardly doubt; and this may, if a new thing, be the desideratum which science is in search of."

The chemical forces in blood, and the separation of bone in one set of cells, muscle in another, nerves in a third, fat in a fourth, bile in a fifth, urine in a sixth, and all other secretions, *from the same blood*, are now being investigated with an acuteness and energy never before equalled. Powerful microscopes, delicate balances, reliable re-agents, greater experience, tact, and expertness, in all necessary manipulations, promise a more rapid advancement in pathology and organic chemistry in future. To the practical farmer, the application of chemical knowledge to the feeding of cultivated plants, will probably be most intelligible, and therefore satisfactory and useful. Among the many substances that chemists have suggested as likely to fertilize the soil, the nitrate of soda, or "cubic nitre," is not the least important. It has the merit of being much cheaper than the nitrate of potash, (saltpetre,) and is, by some wheat-growers, regarded not inferior to that valuable salt. In an agricultural point of view, ammonia, which is a powerful alkali, and nitric acid, which is an intense acid, (aquafortis,) have very similar properties. Both yield available nitrogen to growing plants. Ammonia is formed by the chemical union of 14 parts of nitrogen with 3 of hydrogen; and nitric acid is formed by the chemical union of 14 parts of nitrogen with 40 of oxygen. 17 is the equivalent number of ammonia, and 54 that of nitric acid.

In the second volume of the Journal of the Royal Agricultural Society of England, there is an account of an experiment in which 42 lbs. of nitrate of soda were drilled in with seed wheat upon a quarter of an acre. The result was a gain of 2 bu. and 2 pecks in grain, and 129 lbs. in straw. The wheat weighed 155 lbs., and the entire gain in both wheat and straw was 284 lbs. In this experiment, a pound of the salt gave over 3.½ lbs. of wheat, and over 3 lbs. of straw. In another series of experiments with this salt, it gave a small addition to the yield of grain, but a large gain in straw. In another experiment, with cubic petre and common salt, 112 lbs. of each being sown broadcast on an acre of wheat early in the spring, the gain was 4.½ bu. (from 21 to 25.½); and in another, 8.4 bu., or from 19 to 27.4. As soda is a much cheaper alkali than potash, it is highly important that experiments be made in this country to ascertain how far soda can take the place of potash in organizing starch in potatoes and the seeds of cereals, such as wheat, maize, barley, and oats. Any County Society can make a valuable experiment with carbonate of potash, (common pearlash,) and carbonate of soda, on the growth of potatoes, corn, or wheat, for five dollars. Let all the money be paid for equal quantities of the salts named, and let these be pulverized and mixed with four times their weight of fine dry loam. Now, get a little cup that will hold about two ounces of this compound, and apply a cup full to each hill of potatoes, or corn, spreading it over at least a square foot of surface, at the time the seed is planted. The plan should be to give one or two rows of potatoes or corn a given quantity, say 16 lbs. of soda, and a like weight of potash to other rows. Leave two rows of corn or potatoes between the manured ones, to which nothing is to be applied. The object is simply to determine, so far as one experiment can, the relative value of potash and soda as food for the plants. Sea-water contains thirty times more soda than potash; and the first named alkali may be economically extracted from common salt, by the aid of caustic lime, in a compost heap. The chemistry of this operation, as well as that of many others, will be explained in the course of the present volume of this Journal.

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EUROPEAN AGRICULTURAL STATISTICS.

The following interesting statistics are chiefly compiled from a French work on Political Economy and Statistics for 1851:

WHEAT AND RYE PRODUCED IN THE DIFFERENT COUNTRIES OF EUROPE, IN HECTOLITRES.*

States.	*Wheat.*	*Rye.*	*States.*	*Wheat.*	*Rye.*
France	80,148,788	51,835,466	Russia	19,000,000	149,750,000
Great Britain	35,478,000	1,500,000	Mecklenburg	622,460	1,200,000
Belgium	4,091,916	5,433,606	Hanover	1,320,000	2,000,000
Prussia	6,634,000	45,876,000	Saxony	1,100,000	2,837,500
Bavaria	2,770,607	6,418,514	Wurtemberg	6,154,821	540,558
Baden	2,570,800	510,600	Hesse	1,915,000	2,200,000
Switzerland	1,000,000	1,200,000	Other German States	1,250,000	8,500,000
Sardinian States	8,300,000	1,000,000	Austria	29,100,000	88,710,524
Spain	———	———	Tuscany	1,500,000	500,000
Netherlands	1,999,902	1,597,906	States of the Church	8,000,000	———
Luxemburg	220,000	850,000	Two Sicilies	19,997,700	———
Denmark	840,000	4,480,000	Other Italian States	8,500,000	———
Schleswig-Holstein	886,200	1,692,600	Portugal	8,510,000	2,528,500
Sweden and Norway	842,665	5,947,820	Greece	275,000	———

In some of these countries, barley, oats, maize, buckwheat, peas, and beans, are important staples.

It is a note-worthy fact that, while we obtain the official agricultural statistics of most of the nations of Europe for 1851 before the close of the year, those of the crops grown in the United States in 1849, and taken by the census of June, 1850, we shall not get till after June, 1852. The fault is in a Congress wholly devoted to party politics. Every sensible man knows that it is not necessary to wait three years after the harvest of 1849 before the public can learn the amount of said harvest.

The careful study of agricultural statistics is both instructive and interesting, after one has acquired a taste for researches of this kind. If we convert the *hectolitres* of wheat and rye grown in France and Great Britain into bushels, and consider each in reference to the agriculture of both nations, it will be seen that while England excels in *tillage*, France greatly excels in *husbandry*. France produces 224,402,453 bushels of wheat a year, and 145,139,305 bushels of rye. England produces 99,324,400 bushels of wheat, and 4,200,000 bushels of rye. To produce their comparatively small amount of grain, the poor husbandmen of Great Britain require about 230,000 tons of imported guano and an immense quantity of oil cake, used first to feed cattle and sheep, and then as manure.. The good husbandmen of France require very little guano or oil cake from abroad, while they annually export to England one-fourth of the bread-stuffs imported into that country. The secret of French and Belgian success in grain-culture is this: Their cultivators make the *excreta* from millions of people worth an average of five dollars a head per annum, as manure. At this rate, allowing the fertilizers from six millions of persons to be lost in France, and those yielded by thirty millions to be saved, their commercial value to the nation is $150,000,000 a year. The general saving of the elements of wheat, in France, is good husbandry, whatever may be their system of tillage.

On the other side of the Channel, the twenty-nine millions of people habitually throw away the fertilizing elements contained in their daily food. Hence the necessity of importing into Great Britain so much grain, flour, provisions, and guano. Some night-soil is saved, perhaps five or ten per cent. of the quantity that might be; but the loss of that from twenty millions of persons, is equal to casting $100,000,000 into the sea. Of our population, now twenty-five millions, no class saves fertilizers equal to the consumption of one million people, or four per cent. of the whole, so that our annual loss exceeds $100,000,000 from this source alone. But we habitually waste the droppings of our domestic animals, and, unlike England, export vast quantities of cotton, breadstuffs, and provisions, which added to the elements of crops washed out of the soil in the process of tillage, and by the action of our hot summer sun, bring up our loss, otherwise than in food consumed, to at least another $100,000,000 a year. More than 20,000,000 acres are devoted to the production of annual harvests, in the Middle, Western, and Southern States, whose crops are sent out of the States in which they are grown. To apply a ton of guano to each ten acres thus deprived of the things that make grain, meat, cotton, and tobacco, allowing only 200 lbs. to the acre, would demand the annual importation of *two million tons*. This would cost in our seaports $40 per ton, or $80,000,000. But there are at least 60,000,000 acres being gradually impoverished in the United States; and a single dose of manure, equal in value to four dollars per acre, involves an outlay of $240,000,000 a year. By carefully husbanding manure, the farmers of Belgium, after feeding the densest population in Europe, have a considerable surplus of meat and grain for export. It is only the people who speak the English language that fail to appreciate this obvious truth:—*The inhabitants of Cities are bound to feed the land which feeds them.* The citizens of London and New York do not possess common sense enough to comprehend one of the plainest laws of Providence. Our rural economy is anything but *economical*, and that of Great Britain is but a shade better.

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* One *hectolitre* is two and eight-tenths bushels.

LIVE STOCK IN SEVENTEEN OF THE LARGEST NATIONS OF EUROPE IN 1851.

	Horses.	*Cattle.*	*Sheep.*	*Pigs.*	*Goats.*	*Asses & Mules.*
France, ...	2,818,196	9,936,536	32,151,430	4,910,720	964,300	787,330
Great Britain, ...	1,500,000	6,865,000	32,000,000	4,000,000	210,000	——
Russia, ...	18,660,000	22,120,000	39,000,000	6,300,000	1,550,000	——
Austria	2,327,180	11,471,628	33,767,000	7,000,000	448,000	92,908
Prussia	1,570,000	5,042,000	16,260,000	2,116,000	395,000	——
Belgium	250,000	912,740	780.649	421,208	85,000	——
Turkey	1,950,000	8,300,000	14,300,000	800,000	1,500,000	——
Spain, ...	800,000	2,000,000	18,000,000	2,000,000	4,000,000	900,000
Denmark	825,019	884,178	1,164,544	157,599	——	——
Bavaria, ...	349,690	2,625,294	1,899,898	842,851	107,236	——
Sweden and Norway,....	501,378	2,474,615	2,854,180	892,488	177,470	——
Hanover,..................	257,300	794,000	1,681,000	201,000	8,000	——
Wurtemberg	106,350	1,186,780	676,659	167,219	27,947	——
States of the Church,.....	64,500	171,800	1,256,000	246,200	123,800	5,500
Two Sicilies,.............	150,000	400,000	4,000,000	2,000,000	1,000,000	210,000
Portugal,.................	817,000	740,000	4,980,000	720,000	1,400,000	——
Greece, ...	120,000	900,000	2,500,000	40,000	300,000	——

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THE WINTERING OF STOCK.

THERE are three facts connected with the wintering of stock which ought to be well considered by every one who keeps a cow, horse, pig, or sheep.

1. It is a fact that the production of animal heat in the body consumes more than half of the food taken into the stomach.

2. It is a fact that external warmth serves as an equivalent of food to an extent which is of great economical importance.

3. It is a fact that the aliment daily taken into the systems of all animals, should be precisely adapted, by its chemical composition and solubility, to the natural wants of every organ and tissue in the living being.

To the above, we might add other truisms in the keeping of domestic animals, did not long experience admonish us that a few facts, clearly stated, are more useful to a majority of readers, than any attempt to express in one article all that ought to be said on any important topic in husbandry. It may be asked how we know that more than a moiety of food eaten by a horse, ox, or sheep, goes to create animal heat? This is our answer to that question: By the analysis of hay, oats, corn and corn-stalks, and other food of stock, we learn the amount of carbon, (coal,) oxygen, hydrogen, and nitrogen, that 100 lbs. contain. It is known that sensible heat is always generated when carbon, in vegetable substances, (of which wood and coal are familiar examples) combines chemically with oxygen, as in combustion. Now, nearly two-thirds of the carbon taken into the stomach in forage, roots, or grain, passes out of the wind-pipe, in combination with oxygen, (vital air,) as carbonic acid. It is just as impossible to burn 20 lbs. of hay in the system of a horse, or cow, and not have it evolve heat, as it would be to burn the same hay in a stove without so much as either warming the fuel or the stove. There is really no more mystery about the production of animal heat through the agency of respiration and digestion, than there is about the heat in a steam boiler; but the needless waste of animal heat, and of the fuel that generates it, in the six coldest months in the year, in this country, amounts to a loss of many millions. To prevent this loss, is the main object of our present writing. It can be done by providing warm and comfortable stables, houses, and sheds, for all kinds of stock, including poultry and honey-bees. By ceiling stables in wooden barns inside with rough boards, and filling the space between the outside boards and the ceiling with dry tanbark, or dry horse dung, we have made them sufficiently warm, so that no manure would freeze in them except in extremely cold weather. In basement stables, surrounded by thick walls laid in mortar, and covered by a floor and hay or grain, a word of caution is necessary, not to forget due ventilation. A great many horses, cows, and oxen, are injured by being kept in badly ventilated stalls and stables. Let it never be forgotten by persons sleeping in tight rooms, and by those that rear and keep domestic animals, that the air expelled from the lungs in breathing, *always contains one hundred times more carbonic acid gas* than it did when it entered them. This poisonous gas should have a reasonable outlet from all stables, especially where many animals are kept in one apartment. Nothing but knowledge will enable a farmer to combine warmth and ventilation for the health and comfort of all that breathe, whether in his own dwelling, in stables, pig-styes, bee-hives, or poultry houses. In this, as in all other matters, extremes are to be avoided.

In wisely selecting the food which is best adapted to the natural wants of neat-cattle, milch-kine, working teams, sheep, and poultry, we all have much to learn. Agriculturists in the Southern States do not appear to understand the art of preparing forage plants, such as cornstalks, straw from grain, grass, or hay, for consumption, so well as do the cultivators of the North, where long winters compel more attention, and give greater importance, to the subject. We have been particularly impressed with the neglect of corn, in Maryland and Virginia, a month after it should have been cut up at the roots with a view to make forage of the stems, leaves, and "shucks," for the stock. That is to say, we have seen corn so cut up there after several frosts, and when dead ripe, and a whole month too late, according to the maturity of the crop. All cereal plants undergo important chemical changes at the time of, and immediately after, the ripening of their seed. What these changes are will be hereafter explained, under the head of Agricultural Physiology. At present, we will assume that the farmer has feed enough for the animals he intends to winter; and if he has not, he cannot reduce his stock, by the sale of a part, a moment too soon.

The value of cutting feed, such as straw, cornstalks, and hay, is a matter on which we all need more light. It is the general belief that it pays well for the labor; but will it pay to cut good hay, even for working cattle? If one has hired help, and nothing else for them to do while cutting hay, doubtless it will aid digestion to cut up the stems and leaves of forage plants. And it may be good economy, as is often done, to use a horse-power for cutting both dry and green feed, such as roots and straw. We have cut the feed of fifty cows in that manner, and thought we realized a profit in the operation; but we usually poured boiling hot water, drawn from a heater, over 100 bu. of cut cornstalks, hay, or straw, in a water-tight box, and let it remain till cold and eaten. This mass of hot water greatly promotes the extraction of all the nutriment there may be in stalks, leaves, and shucks or husks, by the organs of digestion. Meal, bran, or shorts, are mixed with the cut feed before the water is applied; but in feeding cut carrots, (of which we have fed a good many,) they were given raw and separate. One hundred pounds of carrots ought to yield at least fifty of milk, in good cows. The production of milk, however, is an operation of which we shall speak at another time. How to make flesh and fat to the best advantage, are points of some interest to those who keep animals and prepare them for the butcher. Our own observation leads to the conclusion that it is better economy to boil corn, peas, and barley, for fatting hogs and cattle, without grinding, if one has to pay from 8 to 16 per cent. of the grain to the miller. Cooking food, like "homony," renders all its nutriment available, and grinding can do no more, and one loses the toll, whatever that may be. Nature maintains animal heat for chemical purposes, or, to aid in transforming vegetable into animal tissues. Cooking food is a step in the same direction, for it effects important chemical changes in the substances cooked. How far hot water may be economically used in preparing forage, seeds, roots, tubers, apples, and pumpkins, for the consumption of fatting cattle, must be decided by future experiments. Whatever feed domestic animals receive, it should be given them at stated periods of the day; and all that is left, should be promptly removed, that the animal be not allowed to breathe upon it and taint it with the foul exhalations from the body. One of the most common errors in wintering stock, is the notion that they should not gain as much in weight when kept up, or fed in a yard, as when running in a good pasture in summer and autumn. Every day that a pig, heifer, steer, lamb, or colt, lives without growing, involves the owner in expense and probable loss. The art of stunting young animals is more practiced than studied; and the principles of making Shetland ponies, and such wee-bits of oxen, cows, and hogs, as one meets with in some States, ought to be known to all. Nature kindly contracts the body to meet the limited supply of food, by bringing the system prematurely to ripeness, till some of the adult horses weigh considerably less than the largest sheep. To add weight in muscle and fat, over and above the daily loss by necessary absorption, the keeper of young animals must give them more than barely enough to maintain life; and yet this is the rule of many a farmer in wintering his stock—hogs, cattle, and sheep. What an animal requires according to the weight of its body, to make good the wear and tear of ever-consuming life, in the hourly removal of the elements of bone, tendon, nerve, cellular and vascular tissue, fat, &c., is not known. When an adult animal neither gains nor loses weight, if we subtract from its food all that is voided by the bowels and kidneys, and in respiration, the excess is mostly appropriated to repair the waste in solids, which is constantly in progress. But the effete matter (dissolved solids) pass out of the system mingled with the residuum of food daily eaten, and we have no means of separating the carbon from the brain or muscles, in the carbonic acid that escapes from the lungs, from the carbon in the blood derived directly from food.

Although we cannot say that such a per cent. of aliment goes to repair the bones, such a per cent. to make muscles, or nerves, or fat; yet it is easy to determine by experiments, what kind of food, in what condition, and how much, one should feed to obtain the highest profit. As a general proposition, it may be truly said that about one-third more animals are kept than the food to keep them on will warrant. Life is supported, but *meat* is greatly decreased in quantity and value. The corn that will keep a hog six months without gaining a single pound in flesh, will make 75 lbs. of good pork or bacon if skillfully fed. The same rule applies to all domestic animals. Instead of using the daily feed of cows to elaborate milk or flesh, the system consumes it all to make the vapor and gases that escape from the wind-pipe, and the excreta from the skin, kidneys, and intestines. In keeping dairy cows, and sheep, we have had occasion to investigate grass, hay, roots, and corn, when eaten by these and other animals.

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RURAL HOMES,

OR SKETCHES OF HOUSES SUITED TO AMERICAN COUNTRY LIFE.

The above is the title of another book on rural subjects by Gervase Wheeler, the very name of which makes one feel comfortable and invites a hearty perusal of its pages. "Rural Homes"! what an association of pleasant thoughts these words call forth—how enchanting to those, who, with a heart full of the real and imaginary charms of the country are doomed to the narrow, noisy limits of a street house in the city. Downing's delightful works on Country Houses and Cottage Architecture, as well as on Landscape Gardening, created a new era in the rural life of this country; perhaps no man can look abroad and witness more satisfactory evidences of the salutary influence of his labors. From one end of this great country to the other, the traveler recognizes, at least, *attempts* at the models he has given, showing conclusively that people have begun to read and think upon the subject of architecture, and whatever concerns the comfort, convenience and beauty of their homes. This is a great point gained, and we may count henceforward upon rapid and steady progress. Many errors will no doubt be committed, until more accurate knowledge is obtained, and taste more cultivated and refined. For the attainment of these ends we must depend mainly upon the circulation of sound writings. The character of Mr. Downing's works is now well known, and it is unnecessary to recommend them to all who wish to read on the subject, to increase their knowledge or refine their taste. The book before us now is one we can also recommend most heartily. We have given it a pretty thorough and careful perusal, and the pleasure and instruction we have derived makes us feel grateful to the author, and bespeak for his book a place in the library of every intelligent person whoever expects to build or improve a suburban, village, or country house.

Mr. Wheeler is an experienced practical architect, and therefore not only treats of style and construction in general, but takes up all the details from the foundation stone to the chimney top, so that nothing is overlooked or forgotten. The subjects of water conveniences, warming and ventilation, so important in dwellings, and so little understood, are brought forward prominently and treated with great detail and simplicity. Excellent advice is given in regard to choosing sites for dwellings, in adapting the style to the surrounding scenery and circumstances, the exterior and interior finish, in the arrangement of fencing and grounds, disposition of outbuildings, and in fact, in whatever concerns the Home, out-doors or in. The various branches or divisions of the subject are treated of in separate chapters, and we give a synopsis of the first, and would do so of others, did our space permit. Chapter first treats of "*The Excellensies of a House—Choice of a Site.*" Here the author points out the popular errors committed in building, and epitomises the "Excellencies" of a Home thus:

1. Convenient Arrangement.
2. Facility of Construction and Repair.
3. Perfect Protection from Heat and Cold.
4. Adequate Means of Warming and Ventilating.
5. Congruity with the Scenery around.

No matter what the style of a house, or what the size, these are the great points, and deserve the prominence Mr. Wheeler has given them. In speaking of the general arrangement of the grounds, the tenor of the suggestions are unexceptionable, but to the following we must object:

> "The fruit and vegetable garden, with a sheltered patch for herbs you place near the kitchen and servant's offices, and are not very anxious they should be in sight, for horticulturise it as you will, a row of bare bean poles is not a very sightly object from a window."

We admit that fruit and kitchen gardens in general are not very *sightly*, but we believe they may, and ought to be so. Suppose, for instance, that the borders are well planted with nice pyramidal and dwarf fruit trees, the walls or fences covered with grapes or trained trees, the interior compartments well cropped with vegetables; and suppose even bean poles, not bare, but covered with beautiful running peas and beans;—such a garden would not be unsightly, but beautiful, the pride of its owner and the admiration of his neighbors. We know of a few such gardens, though but too few, in different sections of our country, and when business calls us in their neighborhood we often travel many miles to visit them. Next month we intend to present a chapter from the book, with illustrations and description of a Suburban Cottage.

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WINE MAKING.

BY C. BLAKELY, OF ROXBURY, CONNECTICUT.

I SAW in the October number of your paper, a request that some one acquainted with the process of making wine, would communicate information on that subject. To the request of your correspondent, I would add my own, together with some remarks of a practical nature, such as my limited knowledge and experience may suggest, with the hope of ultimately securing the desired result. And here, as it seems to me, we should commence with the *cultivation of the grape.*

For the purpose of making wine, it is of no small importance that a kind of grape be selected that is well adapted to that particular use, otherwise the desired object will be, to say the least, but imperfectly accomplished. It is one thing to extract juice from a sour, ill-flavored grape, but quite another thing to convert such juice into good, well-flavored wine. The grape should also be adapted to the *climate*, and should ripen in season to avoid the autumnal frosts. The red, and white Scuppernong, which are a good wine grape south of 37° north, would entirely fail, for all practical purposes, in more northern latitudes. The Catawba, which has been thoroughly tried, as a wine grape, in the neighborhood of Cincinnati, particularly by Mr. LONGWORTH, and is esteemed by him one of the best wine grapes for that part of the country, besides being an excellent table grape, would probably flourish well from Washington City to Boston. I have this year raised them in great perfection, although some of them were a little injured by early frost. The Isabella, which is probably inferior to the Catawba as a wine grape, will do for still more northern latitudes.

Locality, soil, and due preparation of the ground, are other things to be considered at the commencement of grape culture. Land which has a southern inclination is preferable, and, in northern latitudes, indispensable, for those kinds which ripen late in the season. High ground, which is not too dry, is also preferable to low, marshy land, both for producing a better quality of fruit, and escaping the frosts of spring and fall.

For *propagating* the vine, I consider grafting the better mode to commence with, in case a vine with roots attached cannot be obtained. When a root is to be grafted, it is not necessary that it should be of any considerable length; neither is it necessary that the stump of the vine to which it belonged should be attached to it. Just procure a root from among the wild, native kinds, of any convenient or desirable length, then proceed to divide it into parts, say a yard in length, so that each part shall have several lateral branches or small fibrous roots attached to it, and then insert in the butt end of each, one or two grafts, precisely in the manner of grafting fruit trees. They should then be carefully placed in the ground where they are to grow, and should receive necessary care and protection. The grafts may be cut at any time from October to March, except in warm latitudes, and may be inserted in April or May following. If they are cut in the autumn, they may be preserved by burying them in the earth, in a cool place, till May or June, but no vegetable matter should be allowed to come in contact with them, or they would be liable to mildew and rot.

When a vine with roots attached is once obtained, it is preferable to propagate by layers. To accomplish this, a vine or branch is selected in the spring, and extended on the earth near by where it is to be imbedded, so that the young shoots will start upward from the earth; and when they have acquired the height of a few inches, the vine or branch to which they belong should be carefully laid in a trench previously prepared for that purpose, and covered over with rich, mellow earth, when it will soon assume the character of a root, and will throw out small roots at short intervals along its entire length, and may, in the autumn following, be cut into almost as many portions as there are vines or branches ascending from it, each of which may be transplanted and become a separate vine.

When it is difficult or impracticable to manage in this way, as is often the case when the vines have been trained to a frame or trellis, so that there are no lateral branches near the earth, a very convenient mode of propagating is by means of boxes. Make a box, say eight inches square, and open at the top; saw out a piece from the top downward, and from two opposite sides, to the depth of a couple of inches; fill with earth, pass the vine through the opening made by the saw, confine it there and cover over with earth. It should be frequently watered through the season, or till roots are well formed, when it may be amputated and removed; thus becoming a separate vine. Several boxes may be thus attached to a single branch of sufficient length, in each of which a separate vine may be obtained. It is objected by some that this method tends rather to dwarf the plant, and to render it of comparatively slow and feeble growth. While the roots are forming and the vine is small, it may be well to prevent its bearing fruit for one or two years, as that will materially assist the growth of the plant. A few years since, Dr. G. B. SMITH, of Baltimore, practiced this method in training a single vine, till it had acquired considerable size, when he changed his treatment of it by pinching off the young and tender twigs, instead of the young fruit, as before, thereby retarding the growth of the vine, and the result was a fine crop of grapes. The vine will occasionally need pruning, and with that, as with the fruit tree, it is better to *prevent* redundant growth, by pinching off the buds or young twigs soon after they make their appearance, thus securing the more rapid growth of those parts which are designed for bearing fruit.

The grape vine, unless planted in a rich, deep, calcarious earth, will also repay well the occasional bestowment of a little manure, particularly that possessing alkaline properties. In conclusion, I would say, that with your permission, Messrs. Editors, I propose in a future number of your paper, unless superceded by some other pen, to resume the subject with which this article is headed—that of *making wine.*

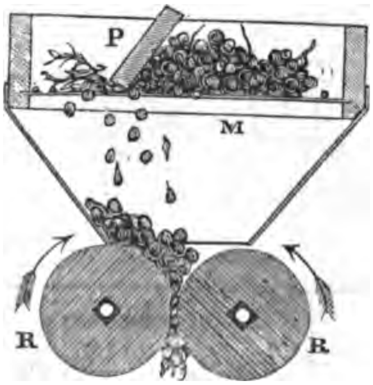
We hope our correspondent will give us his system of making wine from the grape. We give the process as pursued by CORNEAU & SON, near Cincinnati, from the gathering ofthe grape to the bottling of the wine, for which we are indebted to the Western Horticultural Review:

"1. *Gathering.*—The grapes when fully ripe are gathered in baskets containing about a bushel, as well as in a sort of 'pannier' of wood, made very light and strong, and which is supported by straps, or thongs of willow, on the back of the picker; they are brought from the vinyard in this manner and thrown upon the picking tables, where they are carefully assorted.

"2. *Picking.*—This consists in removing by hand, all green, shriveled, or decayed grapes, which are thrown into tubs or barrels and pressed separately, to make a common wine or vinegar. The finest grapes are carried thence to the stemming apparatus, where they undergo another operation.

"3. *Stemming.*—Besides the improvement in the quality of the wine which this process imparts, there is another material advantage derived from it, which consists in the diminution of the bulk or volume of any given quantity of grapes in bunches. The large press of the Messrs. CORNEAU being capable of containing upward of a hundred bushels after the stems are removed; from which about four hundred gallons of wine may be obtained.

"'Stemming' consists in separating the berries from the stem by means of the apparatus of which a wood cut is appended. The grapes are thrown on the wire sieve M., which is open enough to allow the berries to pass, but retains the stems; a little plank, P., is held in an inclined position, to which a backward and forward movement is given, so as to force the berries through the sieve, and to remove out of the way all the stems as they are stript; with the aid of this apparatus, two men can, in the course of three hours, if regularly supplied with grapes, stem from seventy to eighty bushels. Improvements might be made, by which the manual labor would be diminished; but this simple and cheap apparatus which Mr. CORNEAU has introduced, is generally used by the wine manufacturers of France.

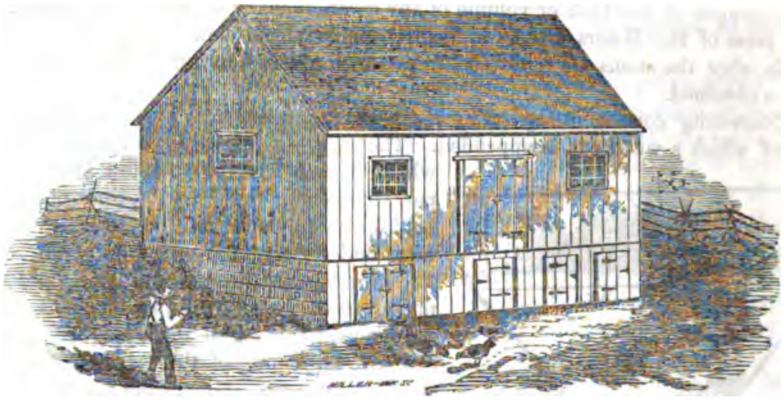


"4. *Mashing.*—After passing through the stemming process the grapes fall into a wooden mill, consisting of two rollers ridged obliquely, to one of which is attached a set of screws by which their distance from each other may be graduated to the proper degree; it being desirable that *every grape* should be crushed but that the seed should not be broken.

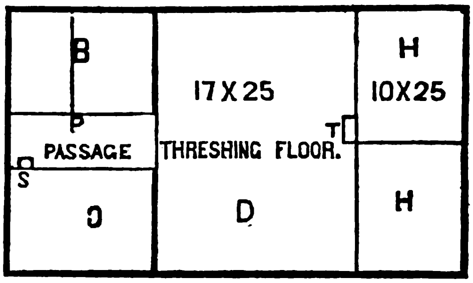
"The rollers are turned by hand. The above wood cut exhibits in R, R, a section of these rollers, and that which follows shows two men, one stemming, the other mashing the grapes. From the rollers, the grape (being entirely separated from the stem and thoroughly mashed) passes into the press, where the final operation of separating the juice is performed. The wine passes from the bed of the press, by means of a conductor, into the basement, from whence it is conveyed into casks containing 260 gallons each; these, though by no means of so large a size as those used by some of our wine manufacturers, are of a very convenient capacity for ordinary crops. The first fermentation takes place immediately, and at the end of six or eight weeks the wine becomes perfectly clear—or what is technically termed "*fine.*" A second fermentation takes place in the spring, about the period of the blooming of the grape. The wine should not be bottled until it is *at least* one year old, though it is frequently bottled for immediate use just previous to the second fermentation; this may be done with safety if the bottles can be kept in a very cool place. There are many who think the Catawba wine is better at this period than ever afterward."

SIDE-HILL BARN.

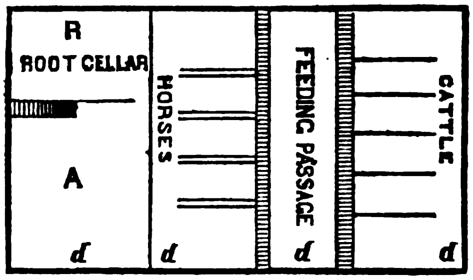
Messrs. Editors:—I send you a design for a side-hill barn, with an elevation, which, if you think of sufficient merit, you can give to your readers.



ELEVATION.—SIDE-HILL BARN.



MAIN FLOOR.



BASEMENT FLOOR.

The barn is designed to be built on the side of a hill which will allow of excavation sufficient to form the basement floor, which contains five stalls for horses and six for cattle, with a feeding passage between, into which is thrown the hay and oats through a trap door in the floor above. From this passage the mangers on either side may be filled very handily and with much less trouble and less risk of being kicked, than when a person has to come up behind the animals to get at their heads. A may be used as a carriage or waggon shed, or to store away straw for the use of the cattle or bedding for horses. R is a cellar for roots, &c.

On the main floor, H is a place for hay and oats. T, trap-door communicating with the feeding passage below. D, threshing floor, 17 by 25. C and B, cribs for corn and other grain. P, passage. S, steps leading into the basement.

The cost of this barn would probably be between three and four hundred dollars, and perhaps is as good and convenient as can be built for that sum. At least the plan is worthy of consideration. J. W. G.—*Hillsboro, Ohio.*

PLOWING IN CLOVER.

BY JOSEPH HARRIS, OF ROCHESTER.

IN the Patent Office Report for 1850-51 we find the following interesting remarks on the cultivation of wheat:

> "Mr. F. D. KINGMAN, of Bergen, Genesee county, N. Y., says that his 'crops of wheat for the last five years have averaged thirty-two and a third bushels per acre.' We commend this fact to the notice of those who have been led to believe that the 'Genesee country' was failing to produce the great staple for which it has long been celebrated. Mr. K. has the following remarks on wheat culture:
>
> "'Time of seeding, from 1st to 16th September; of harvesting, from 20th to the last of July. Brine and lime seed, and sow one bushel and three-fourths per acre; sometimes I sow two bushels, but find it too thick. Plow three times: have this year procured one of NOURSE & MASON'S subsoil plows, and subsoiled a part of each wheat field. It takes three heavy horses to haul the surface plow seven inches deep, which is my gauge. Subsoil with a yoke of oxen and a pair of horses, driving the plow six inches below the cut of the surface plow. The increase is from eight to ten bushels per acre. Within the last ten years, I have not been troubled with the Hessian fly but once. Price of wheat, from $1 to $1.12. At least one-third of my wheat is sown after spring crops, and clover always follows, being sown in April, at the rate of ten pounds of seed per acre with one hundred of plaster. I turn nothing into clover fields in the spring; and when it is half in blossom, turn under with the plow. I now raise too much straw, and feel the need of understanding chemistry to learn what to apply to increase the berry. We once had a chemist at Rochester (DR. LEE) who would give the desired information, but I did not then know that it was needed by me.'"

It would appear folly to condemn any system of culture or rotation that yields on an average of five years thirty-two or thirty-three bushels of wheat per acre, and we have no desire to do so; yet the fact that too much straw is produced from plowing in clover is a significant and interesting corroboration of scientific experiment, and deserves some notice.

It has been shown by Mr. LAWES' experiments, that when wheat is supplied with ammonia, (nitrogen and hydrogen,) it obtains sufficient carbon from the carbonic acid of the atmosphere; and that when carbon was supplied, either as farm-yard dung, rape cake, or ground rice, the crop was increased only to that extent which the ammonia they contained would alone have benefited it. Thus: two hundred pounds of sulphate of ammonia, containing forty pounds of nitrogen *and no carbon*, had as great a beneficial effect as eight hundred pounds of rape cake, containing the same amount of nitrogen and some *six hundred pounds of carbon besides*. The same effect was produced with the ground rice and farm manure—no benefit being derived from the carbon. It was also found that as large a crop could not be raised with rape cake as with ammoniacal salts; for when rape cake was supplied in sufficient quantity for its nitrogen to be equal to that supplied in the ammoniacal salt, the straw was so unnaturally developed that the crop was laid and an inferior quality and less quantity of grain produced. That this effect was caused by the superabundance of carbon in the soil, few, we think, will question. The uniformity of the results through a series of experiments for several years leaves no doubt on our own mind, and had we space the point might be illustrated from numerous facts of which every farmer is cognizant.

A ton of dry clover hay would contain about 40 lbs. nitrogen, 960 oxygen, 740 carbon, and 80 hydrogen. It will be seen that when this is plowed in for a few years, that oxygen and carbon would accumulate in the soil to an injurious amount, and "too much straw" would be raised, especially on soils in which there was not an abundance of lime and saline substances. Now, nitrogen being the only element of value that is gained by the growth and plowing in of clover, and carbon and oxygen being injurious, it is an interesting inquiry—How can we get rid of these substances and retain the nitrogen? Nature has furnished the means, and fortunately science has discovered them. When food is consumed by animals, the carbon and hydrogen it contains is burnt in the lungs to supply animal heat, while the nitrogen and greater part of the earthy matter is voided in the liquid and solid excrements, which may be returned to the soil, where, providing there has been no loss, they will be more beneficial than had the food itself been plowed in. This method also affords an opportunity of enriching the nutritive qualities of the food and greatly increasing the value of the manure by giving to the animals, with the clover, rich nitrogenous foods, such as oil-cake, peas, beans, &c. But this is "high farming," and requires more capital than most farmers are willing to invest on their farms. To these generally, any caution about growing "too much straw" is unnecessary: plowing in clover is the best thing they can afford to do; and in a few years, when by this means their straw grows too rank, they will have spare capital to invest in more stock and artificial foods.

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Wm. B. Le Couteulx, of Black Rock, has furnished us with the following translation from the French, which we publish with pleasure, and has kindly promised us further favors:

Report made to the Central Agricultural Society of Paris, upon the different Maladies existing in Wheat in France, particularly a new Malady which appeared for the first time in 1851.

Besides the accidents from vegetation, to which the wheat is subject, and which in the markets according to these different accidents, causes it to be called, *scalded, shrunk, melted or laid down wheat* &c., there are three maladies which are peculiar to it.

Reached by the first, the wheat is deformed and of bad aspect; it is almost always deprived of the re-productive germ, and very often of that substance necessary to make bread. It is called Rickety—in French *Rachitique*.

In the second, the grain, its envelope, and the ear, altogether, transform themselves into a black and dry dust, which the winds or rains carry away. It is called Coal—in French, *Charbon*.

In the third, the appearance of the wheat is altogether different, the ear keeping its exterior shape until harvest; but the least pressure with the fingers will be sufficient to crush it, and a fat, black, dusty substance, of an infectious smell, will come out of it. It is called Rot—in French, *Carie*.

The new malady which has appeared this year, (1851,) has no analogy with those above enumerated. Instead of being in the head of the plant, otherwise the ear, it is in the low part of it. This is what caused it, from its first appearance, to be called the Malady of the foot—in French, *Maladie du Pied*.

That malady has its seat close to the ground, or between the roots and the first joint of the stalk. It consists of a mouldiness which, at first sight, one would think came from being burnt. In some cases, the mouldiness covers the whole stalk, when in some others only a part of it. The part so affected dries up, dissolution commences, and it soon loses that necessary strength to bear the weight of the plant, which bends and then drops on the ground as if beaten by storm, where it would rot, was not the hand of the farmer ready to gather it.

In some parts said malady showed itself just as the wheat was beginning to bloom; in some others before, and in many others, after. In the first instance, the harvest is entirely lost; in the second, the ear already formed still progresses, but not without some difficulty, remaining short and the grain small, giving only half a crop. If an incision be made in the mouldy place with a pen-knife, it will be seen in the interior that the cellular tissue has lost all its elasticity—that it is no more impregnated with sap, as when in a healthy state, the fibres being stiff, dried up, breaking, and offering all the symptoms of a dead plant. If examined with the magnifying glass, it will be seen that all those white and porous filaments are nothing else than mushrooms, which, although but just rising, have had sufficient strength to stop the ascendant march of the sap and bring death to the plant.

This malady appeared most particularly in the country around Paris—in La Brie and La Beauce, in the valley of Isere, in the departments of the Rhone, Aisne, Somme, Oise, Meuse, Ardennes, and many other parts of France, from which authentic reports are not yet received.

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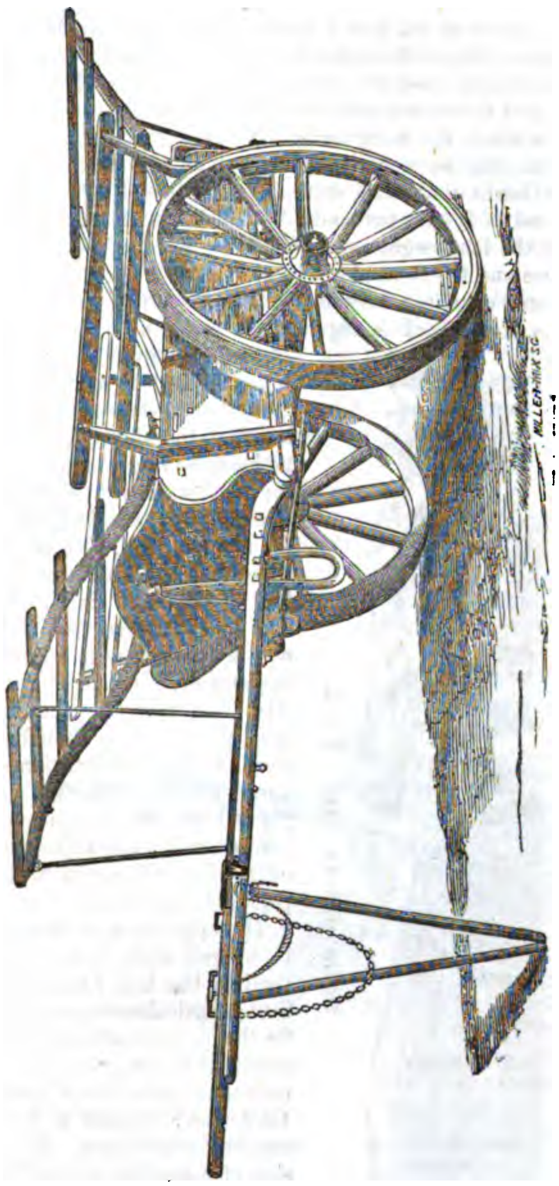
AGRICULTURAL IMPLEMENTS AT THE GREAT EXHIBITION.

BY P. BARRY, FROM NOTES TAKEN AT THE WORLD'S FAIR.

I have never seen a cart at any of our American Agricultural Fairs. There is no lack of plows, harrows, wagons, cultivators, straw cutters, &c., but no implement-maker in America, that I am aware of, has taken it into his head to make and exhibit a nice farm cart. May I take this occasion to call upon them to do so. Will not our implement dealers in Rochester suggest to their ingenious manufacturers to try their hand on carts. They will "take,"—there is no question about this. We use three in our



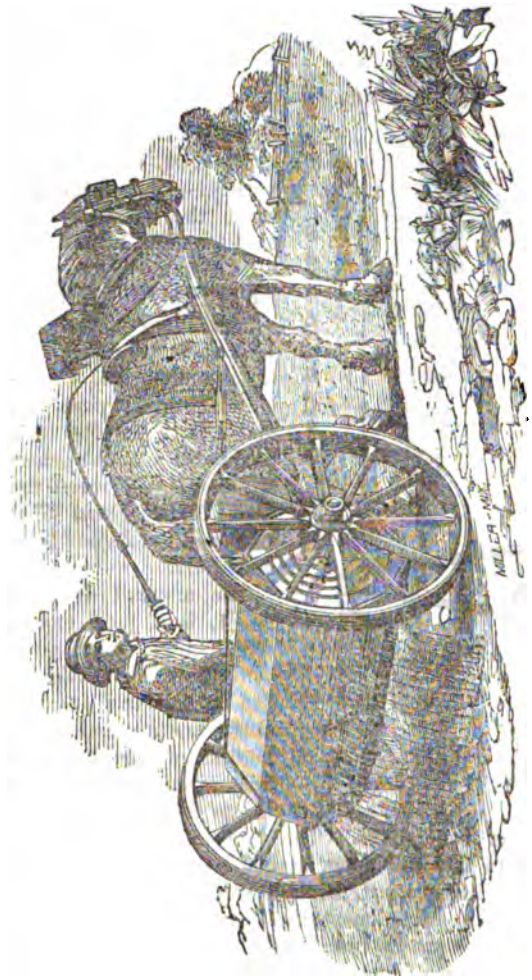
ONE HORSE FARM TILT CART. Fig. 1.

nurseries now, but they are very indifferent articles. It is hard to find a man who can make a cart "that is a cart" for the farm. I do not mean an *ox cart*—one of the most hideous pieces of mechanism that ever rolled on wheels. The moment one enters the English department of implements, he may jump at the conclusion that the cart is an implement of first importance in British husbandry. Not an exhibitor of implements but has brought along his cart as certainly as his plow. And what a variety!—the Farm Tilt Cart, the Harvest Cart skeleton, the Liquid Manure cart, the Spring Cart for fat stock, and many others. Two of these at least seem to be well worthy the attention of agriculturists in every country, and I have not the least doubt will soon be generally in use,—I mean the *One Horse Farm Tilt Cart* and the *Liquid Manure Cart.*

The annexed drawing, fig. 1, is a good model, construction simple and convenient. The body sits flat on the axle, and the shafts are attached to the bottom of the body by bent iron plates; this brings the cart level when at work and obviates the necessity of bent shafts. The tipping apparatus is also novel: an iron bar eighteen inches to two feet long, attached to the front of the body, pierced with holes two or three inches apart, through which an iron rod goes, connecting the body and shafts. By this arrangement the body can be kept at any desired angle in unloading—very convenient in distributing manure or compost in small heaps. The shelving or ladders shown in the cut can be removed at pleasure, and are only intended for carrying loads of grain, hay, &c. The cost of this cart in England is about $50.

"*Busby's Prize*" *Cart*, which is one of the best I have seen, has a body five feet six inches long and four feet wide. Wheels four feet six inches high and four inches wide. The felloes two inches thick inside and one and a quarter inches outside. The body sits close to the axle, and is just as low as it can be to tilt. The shafts are attached to the body by the bar pivot on which the body turns. It has a shelving, or rack, composed of light boards on spreading knees or brackets; two on each side and end. On these brackets there are iron hooks that catch on the box inside and hold it firm. The price of these carts in England is $50 for two and a half inch wheels, and $55 for four inch wheels. All wheels for the land ought to be four inches wide, as they do not sink like narrow ones. *Wide* tires and felloes need not be so thick as narrow ones.

A Mr. Robertson, from Scotland, exhibits a very neat one-horse cart with a *sliding axle*, by which the weight on the horse's back is regulated in going up or down hill. The axle is moved back or forward by the screw behind.—Several carts are exhibited so low that the shafts require to be bent to bring the body level; in other cases the shafts are straight, but attached, as in the foregoing cut, by bent iron stays that effect the same object as the bent shafts. We find by experience that *lightness* in the cart, as in all other implements, is a valuable property, and therefore the best quality of timber should be used in their construction.—Broad wheels, low bodies, simple and convenient tilting apparatus, and a nice adjustment of the *center of gravity*, are the points of importance.

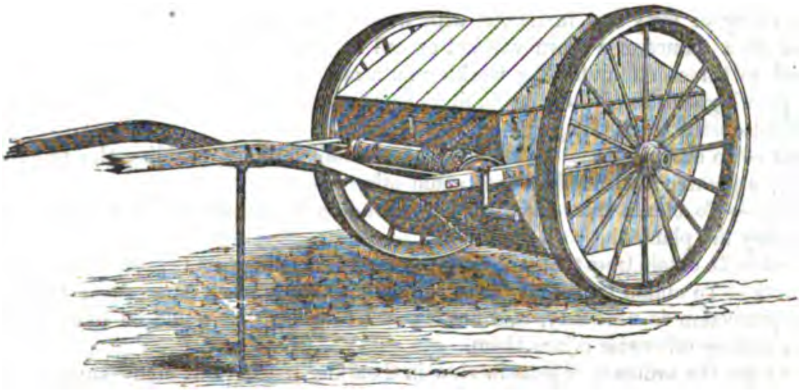


LIQUID MANURE CART. Fig. 2.

The application of manures in a liquid state is now practised by the best English and Scotch agriculturists, and carts for the purpose attract considerable attention. Fig. 2 represents one called the *Cylinder Cart*, which appears to be an excellent contrivance. It consists of a wooden or iron barrel revolving upon its axle. One side of the barrel consists of a perforated board, which is kept uppermost when not at work, and to set it to work it is only necessary to turn the barrel round. Thus valves and delivery pipes are altogether unnecessary; and however hilly the land, or however empty the barrel may be, it will always adjust itself by its own weight, and deliver its contents at a uniform rate. As a natural consequence of this greater simplicity of construction, the price is considerably lower than that of any liquid manure cart hitherto exhibited. The cart shown in the sketch, (fig. 2,) containing 100 gallons, weighs only 5½ cwts. It may be made of any required width, and the delivery apparatus, which is simply a perforated board, can be varied at little cost to suit every description of drilled crop, and also to manure grass lands, &c., broad-cast. It has also been advantageously used in gardens and pleasure grounds, for watering lawns and flower beds. There is a cock from which water or liquid manure may be drawn off into watering pots, or a flexible pipe or hose may be screwed into this cock, or by fixing a small force pump into the air hole of the cart, the water can be forced to any desired height.

The *Tumbler Cart* is another useful article. It is chiefly intended to carry off the sweepings of streets, nightsoil, &c. The design represented in the cut is highly approved and in very general use already in English towns. The body of the cart consists of a wrought iron tank, which is fitted with a delivery pipe and valve that can be affixed or removed in a very few minutes; so that in towns it answers the purpose of a watering cart for the streets, while for agricultural purposes the cart can at any time be adapted to the delivery of liquid manure, either from a pipe, or in the form of a sheet over the back edge of the cart.

The chief peculiarity of this cart consists in its extreme lowness, obtained by passing the axle through the body of the tank, while at the same time the convenience of completely tipping the cart is attained in the larger sizes by the introduction of an eccentric which allows the body to tip, and in fact entirely to revolve on the axle without touching the ground.



TUMBLER CART IN A POSITION FOR TRAVELING.

The great advantage of the low body for filling, not only with fluid or semi-fluid substances, but with earth, gravel, lime, or any other material, for the hauling of all which it is exceedingly well adapted, must be too obvious to require comment. For the purpose of filling, the body can be canted to any required inclination, so that the labor becomes less than that of filling a wheelbarrow, thus effecting an immense saving in the cost of carting every description of earth and minerals. The complete method of discharging the load by entirely tipping the cart, also gives it an advantage for many purposes over every other kind of cart.

I would recommend this cart to all who collect street sweepings, nightsoil, &c. To the scavengers of large cities it would be particularly valuable. In Rochester they use boxes placed on carts, from which the filth is not unfrequently sprinkled over the streets, and I have seen contrivances quite as bad in the city of New York.

Horticultural Department.

CONDUCTED BY P. BARRY.

DWARF FRUIT TREES.

A FEW years ago there was scarcely anything known about dwarf fruit trees in this country, but of late they have attracted considerable attention and their character has become somewhat understood; but there are a multitude of persons who have very faint and incorrect ideas on the subject, and therefore, although it may appear to the better informed class of cultivators a very superfluous undertaking at this time of the day, we are compelled to offer a somewhat minute explanation in justice to many whose claims we are bound to regard.

A Dwarf Tree, then, is a tree which by a certain mode of propagation and culture is reduced far below the natural dimensions; for instance, an apple, which if budded or grafted on a common apple stock will make a tree twenty, thirty, or forty feet high, and as much in diameter, covering perhaps two or three hundred square feet of ground, will, if budded or grafted on a *Paradise* stock, (which is a dwarf *species* of the apple, attaining only three or four feet in height,) never exceed four or five feet in height and as much in diameter, occupying little more ground than a gooseberry bush. A Dwarf Pear, is a pear tree formed by budding on a quince, or some other small species of the pear family. Thus, a pear which if budded or grafted on a common pear seedling, will attain thirty or forty feet in height with a corresponding diameter, when budded or grafted on a quince or a thorn will not exceed twelve or fifteen feet, and may even be reduced to three or four feet by working on a *mesphilus*, a *cotoneaster*, or some very small growing species of the pear family, or "alliance." So it is with other fruits, and the grand objects of dwarfing are—

First—To obtain SMALL TREES, adapted to small gardens, enabling the proprietors to enjoy a greater VARIETY than they could otherwise.

Second—To obtain trees that will correspond in APPEARANCE with the enclosure in which they are planted.

Third—To obtain trees that will BEAR EARLY, for dwarfing begets precociousness; and,

Fourth—To obtain trees that are LOW, EASY OF ACCESS in all parts, easily PROTECTED where protection is necessary, and not exposed to winds that would be likely to blow off the fruit or otherwise injure them.

These are the ordinary objects in view in dwarfing trees. But many suppose that a dwarf tree must, as a matter of course, produce dwarf, or proportionably small fruit. This is a great error, but one which the inexperienced very naturally fall into. Dwarf trees, instead of producing small fruits, or those below the natural size of the variety, very often produce them larger. In another place we have given an account of a wondrous large apple grown upon a dwarf tree. This specimen was at least one-third larger than the average product of standard trees. We have had the past season *Red Astracans* on a three year old dwarf tree about two feet high, nearly twice the usual size on standard trees, and a little standard four year old tree of *Canada Reinette* that produced four extraordinary specimens, the largest one measuring over fourteen inches in circumference. Nothing in all our grounds in the way of fruits, excited so much wonder as this, from the last of August until the 1st of November. The small size of the tree and the prodigious size of the fruit induced many to doubt the reality, supposing that some trick had been played, similar to the fastening of a gourd on an apple tree. As a general thing where a variety does succeed on the *Paradise*, the fruit will be larger than on the free or common stock. So it is with pears—the largest specimens of *Bartlett*, *Louise Bonne de Jersey*, *Duchesse d'Angouleme*, or *White Doyenne*, we have ever seen, were grown upon *dwarf* trees. The idea, therefore, that a dwarf tree must produce small fruit is just the reverse of the fact. At another time we may offer some remarks on the cause of this.

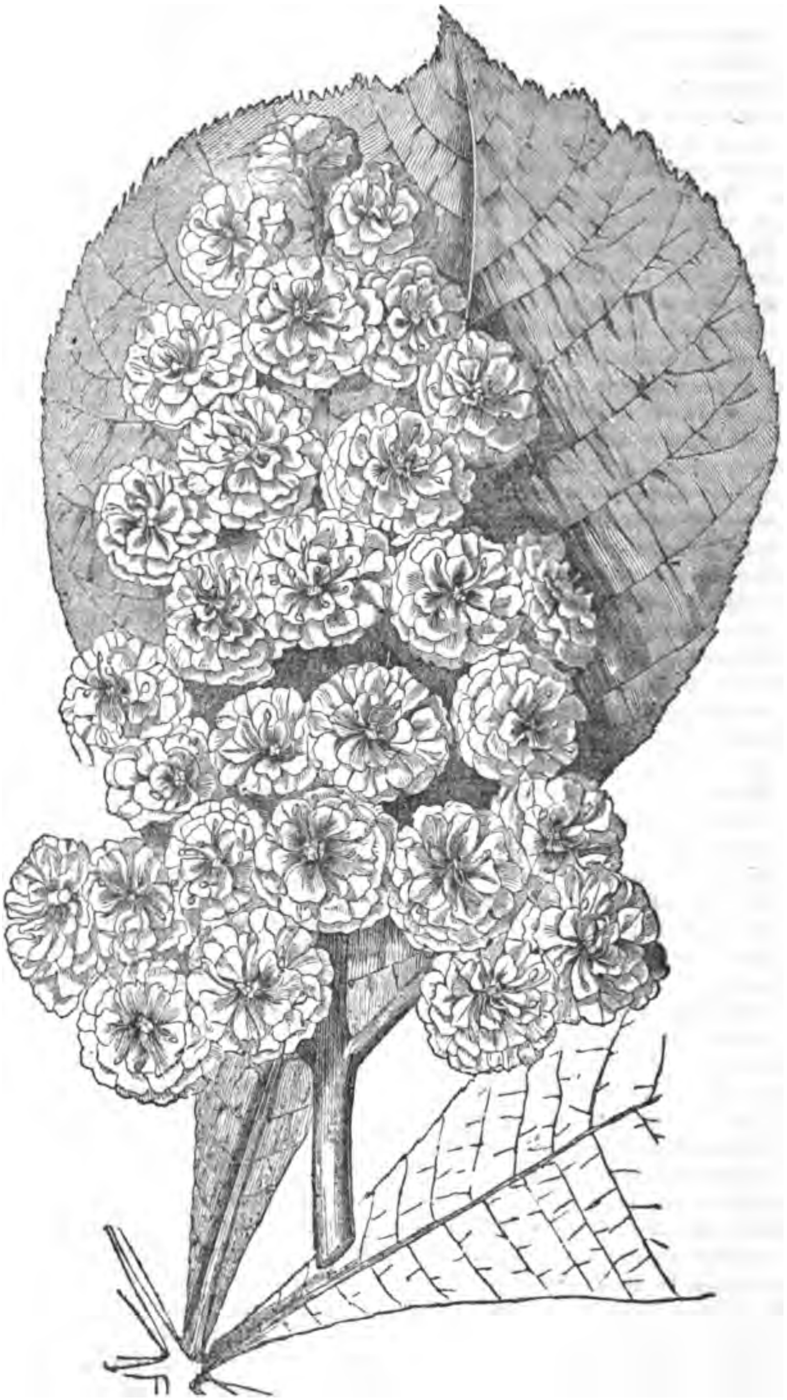
Some imagine that to propagate Dwarf Trees it is necessary to take the scions from dwarfs. We have heard this notion advanced often, and in one case by a young nurseryman. There is not, perhaps one person in ten thousand, however, but knows better than this. Dwarfing is the result of budding or grafting on a particular stock, as we have already said, and it matters not whether we take our buds or scions from a dwarf or a standard tree, from one three feet or thirty feet high, the result will be the same, if the scions are in both cases equally healthy. We can also take buds or scions from dwarf trees and work them on common or free stocks, to produce standards.

In regard to stocks there is one point on which even many intelligent cultivators are not well informed, and that is the necessity of the stock and scion being of the same natural genera, or alliance at least. Thus, the botanical order *Pomaceæ*, or *Appleworts*, as Lindley renders it, in the Vegetable Kingdom, embraces the apple, (*pyrus malus;*) the Pear, (*pyrus communis;*) the Siberian Crab, (*pyrus baccata;*) the Quince, (*Cydonia;*) the Medlar, (*Mespilus;*) the Mountain Ash, (*pyrus aucuparia;*) the Thorns, (*cratægus;*) the *Amelanchiers*, of which our native Shadblow is one; the *Photinia*, the *Cotoneaster*, &c. These have all strongly marked natural affinities, and may with more or less success be budded or grafted upon each other. But the more nearly they are related—that is, the greater the congeniality in their natures, the more successful will be the union: thus, the pear will grow upon the apple, but much better upon either the quince, thorn, or mountain ash. But, if we should attempt to graft one of the species belonging to this order of appleworts, (*pomaceæ,*) upon another belonging to the order *drupacae* or "almondworts," [*Veg. King.*] we would be utterly unsuccessful, for these two have strongly marked botanical differences, and little or no congeniality of nature. We can never, therefore, graft apples, pears, or quinces, upon cherries, plums, or peaches.

The order *Drupaceæ* or Almondwort, alluded to, embraces all the species of plum, cherry, peach, apricot and almond. These have all certain prominent botanical similarities and affinities, and may all be worked upon each other with success proportionate to the strength of the affinity: hence, the peach, apricot, almond, and plum, in general grow upon one another perfectly well, but none of them can be worked to any practical advantage upon the cherry. The genus *cerasus*, (the cherry,) contains many species, differing greatly in appearance; for instance, the *Mahaleb* and *Mazzard* are as distinct in general appearance of foliage and habit as an oak and a willow, yet they grow well one upon the other, because of a congenial nature.

We cannot at this time follow up these points further, but we have drawn attention to them, and will add that every one who aims at being an intelligent cultivator should not fail to give it attentive consideration.

Many people who have never seen dwarf trees, but order them from nurseries are quite disappointed when they see them. A tree two, three, or four feet high seems *small* to those who have all their lives been accustomed to large trees. They fear "they will never come to anything." We have seen people in search of dwarf trees, and yet ask the *tallest* tree in a row. Dwarf apples are of course very small when transplanted. A yearling will be from one to two feet, and at two years very little taller, but branched. Such diminutive things to the inexperienced are *too small*. One man says "the dwarf apples are sprouts—not what I imagined them at all." There is a much greater lack of knowledge on this subject than there ought to be, when books and papers that contain the remedy are so abundant and cheap. Young cultivators, think of these things during the approaching stormy weather and long evenings of winter.



THE DOUBLE-FLOWERING WHITE HORSE CHESTNUT.

The Double-Flowering White Horse Chestnut.—We copy the accompanying figure and description of this rare and beautiful variety of one of the most popular ornamental trees from the Gardener's Magazine. We had the pleasure of seeing some fine specimens of it abroad; the largest was in Mr. Le Roy's nurseries at Angers, France: it is some fifteen years old, and about as large as the common sort at that age in this country. It is easily propagated by grafting or budding on the common one, and will no donbt soon be had in our nurseries.

> "Æsculus Hippocastanum florepleno. Double flowered Horse Chestnut.—A rather uncommon and very ornamental tree, equalling in vigor the common sort, from which it differs only in its double flowers. These are very showy, having a strong resemblance to a good double hyacinth; they are pale blush, with deeper blush at the base of the petals. Our figure was made from a specimen communicated by Mr. Rivers, nurseryman of Sawbridgeworth, who informs us that he 'received it from the Continent some seven or eight years since.' The spike of flowers we have represented was not as long as usual, owing to the tip having been killed by the frost in May. The trees flower when quite young."

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Large Apples.—In our part of the country, large apples are by no means a novelty. Our *Twenty Ounces*, *Monstrous Pippins*, and *Pumpkin* apples, are so common that nothing short of the *wonderful* is really worthy of note. We think we have something before us that comes under that head; if not, it borders closely upon it at any rate. A specimen of the *Fall Pippin* we think, produced in the garden of Aaron Erickson, Esq., of Rochester, measuring sixteen inches in circumference, and weighing twenty-six and one-half ounces. We cut this prodigious specimen and found it sound and good to the core, and of very fair quality. There grew on the same tree, another weighing twenty-five ounces, and two others nearly as large. It is a serious, if not a very dangerous matter to grow such apples. Suppose one of these should fall ten or fifteen feet, upon the head of a child, or even of a grown person? But Mr. Erickson does not apprehend any danger of this kind. The tree that produced these monsters is not over three feet high, and this will appear to those not accustomed to the culture of dwarf trees, no less remarkable than the size of the apples. We think Mr. E. may say that he has produced the largest apple on record, on the smallest tree. In all our experience, we have seen none, nor in reading have we seen any account of such large apples. The trees are some seven years planted, and are about ten years old. Mr. Erickson has also produced the largest and most beautiful specimens of the *Alexander* apple that we have ever seen, on dwarf trees, too. The crop on all his dwarf apple trees, the past season, has been remarkably fine, although on standard trees generally, it has been below the usual average. The dwarf pears, in the same garden, were, a few years ago, the finest in this country of their age, but the blight that prevailed here a few years past, made sad inroads upon them.

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DESCRIPTIONS OF NEW PEARS.

BY B. DESPORTEZ, OF ANGERS, FRANCE.

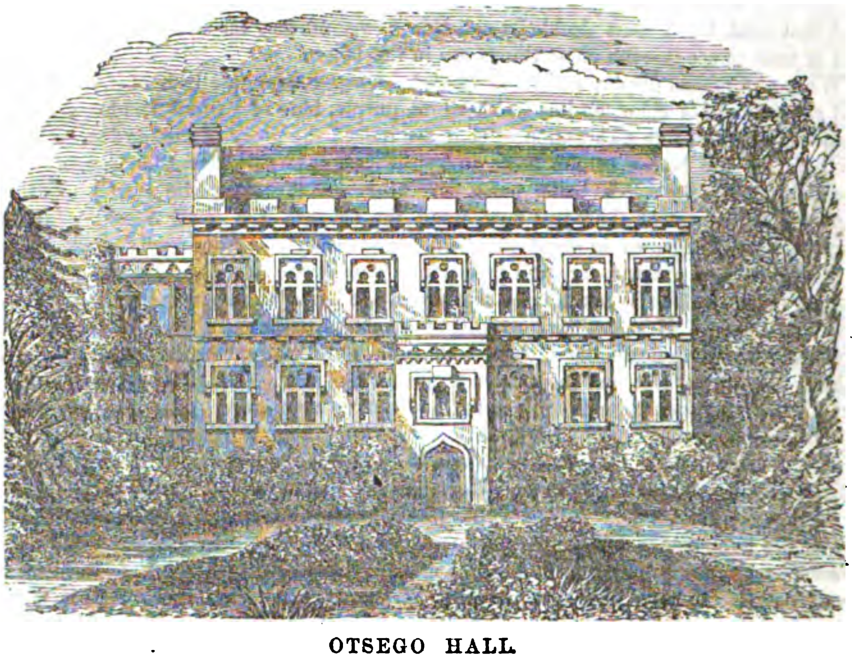
The Alouette pear, (Fig. 1.)—Mr. Andre Le Roy found this variety in one of his nurseries on the farm at Sauge, near Angers. The tree has a pyramidal habit, of vigorous growth, and as a standard exceedingly productive—one of the most profitable for market. The farmer gathers annually 4000 fruits from this tree, weighing 400 lbs., or thereabout, and sells them for six or eight dollars, which, considering how cheap everything is in our country, is considered large profits, and few other kinds yield so much.

The fruit is small—about two inches long and one and three quarters in diameter. *Form*—turbinate, regular, surface uneven. *Stalk*—slender, one inch long, inserted on the surface. *Calyx*—large, broad, deep. *Color*, greenish yellow, sprinkled with gray dots and rosy spots on the sunny side. *Flesh*—breaking, white, juicy, sweet, and agreeably perfumed. Ripens beginning of September here. The hardiness and productive-variety of the latter is a great acquisition. The *Candytufts* are quite remarkable, especially the white rockets and deep purple. No grower of annuals should be without these. The *Convolvulus*, or Morning Glory, makes a fine show; the tricolor, or striped one, is very pretty. An *Argemone*, with prickly leaves, and large, showy, yellow blossoms, appears well. I might go on and cover pages with names.

It is not only in the rarity and variety of the flowers here that its greatest beauty consists, but in the wonderful luxuriance in which everything is growing. There are natives of many widely separated countries, and different climates, yet all are flourishing. This garden is but a small portion of the grounds of Messrs. Vilmorin & Co., devoted to Horticulture; they have several other gardens appropriated to other objects, but, just at this time, this is the most interesting.

Under the title of "*Vilmorin Albums*," this house publishes every year two great folio plates, lithographed and colored, one representing culinary vegetables of the natural size, and the other new and interesting flowers artistically grouped in a boquet. We had the pleasure of examining these Albums. They are kept in the office for the benefit of purchasers of new and rare articles. The seed catalogue of this establishment is prepared in the most skilful manner; and, besides, they issue a small, cheap work, which gives simple directions for the sowing of flower seeds and cultivation of them in the open air.

The house of Messrs. Vilmorin, Andrieux & Co., is well known over all Europe, as well as in America. There is not, probably, in existence a more complete or better managed establishment of the kind. The proprietors are not mere merchants who know how to buy and sell, but they are profound botanists and skilful horticulturists, familiar with the flora of all explored countries and with the particular culture required by different species and tribes. M. Louis Vilmorin is at this moment one of the most efficient promoters of horticultural improvement in France. P. B.—*Paris*, *July*, 1851.



OTSEGO HALL.

RESIDENCE OF THE LATE J. FENNIMORE COOPER, COOPERSTOWN, N. Y. DRAWN BY MISS COOPER, AUTHOR OF "RURAL HOMES."

Youths' Department.

CENTER OF GRAVITY.

The following article on the *Center of Gravity* we take from an excellent paper in the Transactions of the New York State Agricultural Society, on *Agricultural Dynamics*, by J. J. Thomas. It will prove both interesting and instructive to our youthful readers.

The *center of gravity* is that point in every hard substance or body, on every side of which the different parts exactly balance each other. If the body be a globe or round ball, the center of gravity will be exactly at the center of the globe; if it be a rod of equal size, it will be at the middle of the rod. If a stone or any other substance rest on a point directly under the center of gravity, it will remain balanced on this point; but if the point be not under the center of gravity, the stone will fall towards the heaviest side.

Every farmer who erects a wall or building; every teamster who drives a heavy load, or even he who only carries a heavy weight upon his shoulder, may learn something useful by understanding the laws of gravity.

If any body, of whatever shape, be suspended by a hook or loop at its top, it will necessarily hang so that the center of gravity shall be directly under the hook. In this way, this point in any substance, no matter how irregular its shape may be, is ascertained. Suppose, for instance, we have the irregular plate or board shown in the annexed figure, (fig. 1,) first hang it by the hook *a*, and the center of gravity will be somewhere in the dotted line *a b*. Then hang it by the hook *c*, and it will be somewhere in the line *c d*. Now the point *e*, where they cross each other, is the only point in both, consequently this is the center sought. If the mass or body, instead of being flat like a board, be shapeless like a stone or lump of chalk, holes bored from different suspending points directly downwards, will all cross each other exactly at the center of gravity.

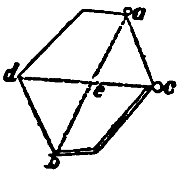


Fig. 1.

An imaginary line from the center of gravity perpendicularly downwards, to where the body rests, is called the *line of direction*.

Now, in any solid body whatever, whether it be a wall, a stack of grain, or a loaded wagon, the line of direction must fall within the base or part resting upon the ground, or it will immediately be thrown over by its own weight. A heavily and evenly loaded wagon on a level road will be perfectly safe, because the line of direction falls equally between the wheels, as shown in fig. 2, by the dotted line, *c* being the center. But if it pass a steep side-hill road, throwing the line of direction outside the wheels, as in fig. 3, it must be instantly overturned. If, however, instead of the high load represented in the figure, it be some very heavy material, as brick or sand, so as not to be higher than the dark part of the figure, the center of gravity will be much lower down, or at *b*, and thus the line falling within the wheels, the load will be safe from danger, unless the upper wheel pass over a stone, or the lower wheel sink into a rut. The center of gravity of a large load may be nearly ascertained by measuring with a rod; and it may sometimes happen that by measuring the sideling slope of a road, all of which may be done in a few minutes, a teamster may save himself from a comfortless upsetting and perhaps heavy loss. Again, a load may be temporarily placed so much towards one side, while passing a sideling road, as to throw the line of direction considerably more up hill than usual,

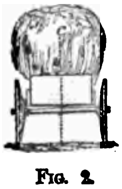


Fig. 2.

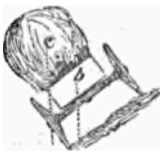


Fig. 3.

and save the load, which may be adjusted again as soon as the dangerous point is passed. This principle also shows the reason why it is safer to place only light bundles of merchandize on the top of a stage coach, while all heavier articles are down near the wheels. When it becomes necessary to build very large loads of hay, straw, wool, or other light substances, the "reach," or the long connecting bar of the wagon, must be made longer, so as to increase the length of the load. For, by doubling the length, two tons may be piled upon the wagon with as much security from oversetting as one ton on a short wagon.

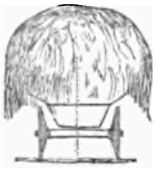


Fig. 4.

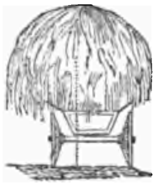


Fig. 5.

Where, however, a high load cannot be avoided, great care must be taken to have it evenly placed. If, for instance, the load of hay represented by fig. 4, be skillfully built, the line of direction will fall equally distant within each wheel. But a slight misplacement, as in fig. 5, will so alter this line as to render it dangerous to drive except on a very even road.

It is familiar to every one, that a body resting upon a broad base is more difficult to overset than when the base is narrow. For instance, the square block, fig. 6, and pyramid, fig. 7, are less easily thrown over, than the tall and narrow block of equal weight, fig. 8. Because, in turning the square block over its lower edge, the center of gravity must be lifted up considerably, in the curve shown by the dotted line; but with the tall narrow block, this curve being almost on a level, very little lifting is required.

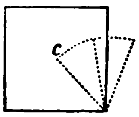


Fig. 6

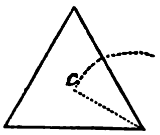


Fig. 7.

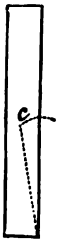


Fig. 8.

Wheel-carriages owe their comparative ease of draught to the fact that the center of gravity in the load is moved forward, by the rolling of the wheels, on a level, or parallel with the surface of the road. Each wheel supports its part of the load at the hub. Hence, on a level road, the line of direction falls precisely where the wheels rest on the ground; but if the road ascend or descend, it falls elsewhere; hence the reason that it will run by its own weight down a slope. Whenever a stone or other obstruction occurs in a road, it becomes requisite to raise the center of gravity by the force of the team so as to throw the wheel over it, as shown by fig. 9. One of the reasons thus becomes very plain why a large wheel will run more easily on a rough road than a smaller one, the larger one mounting any stone or obstruction without lifting the load so much out of a level, as shown by the dotted lines in the annexed figures, (figs. 9 and 10.) Another reason is, the large wheel does not sink into the smaller cavities in the road.

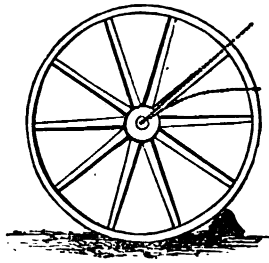


Fig. 9.

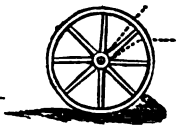


Fig. 10.

When a load is carried on the shoulder, it should be so placed that the line of direction may pass directly through the shoulder or back down to the feet, fig. 11. An inexperienced person will sometimes place a bag of grain as shown in fig. 12. The line falling outside his feet, he is compelled to draw downwards with great force on the other end of the bag. A man who carries a heavy pole on his shoulder should see that the center is directly over his shoulder, otherwise he will be compelled to bear down upon the lighter end, and thus add in an equal degree to the weight upon his shoulder.

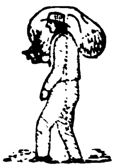


Fig. 11.

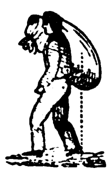


Fig. 12.

Editor's Table.

Our January Number is now before you, kind reader, and it is a specimen of what we intend our paper shall be each month during the year 1852; differing only in this respect, that we design to make each number better than its predecessor. Already we have received largely increased clubs from many places, and our friends in all sections of the country are doing even more perhaps, than we had a right to expect. Without such generous aid from the friends of Rural Progress, we could not furnish the Genesee Farmer at such a low price; with it, we intend to give our readers at least one of the best agricultural papers in the world, for the small sum of three shillings a year to clubs of eight or more.

We invite all to show this number to their friends, and we will supply extra numbers to those who wish them. We often receive letters inquiring on what conditions we send to clubs—whether all are required to be sent to the same office, &c. The *only rule* we have, is to send our Journal to clubs in such way and manner as will *best suit the convenience of our subscribers.*

◆

Agricultural Report from the Patent Office, for 1850.—This is a well filled volume of 579 pages, nearly all of which are occupied with original communications from over one thousand practical farmers residing in all the States of the Union, with one exception. Eight thousand circular letters were sent out from the Agricultural Department; and answers were received in return enough to fill two volumes of 1000 pages each. To re-write and condense this mass of generally badly written manuscript, so as to express its substance in one-fourth the words, and print it on 500 pages, was a labor which but few can appreciate. Under the circumstances of the case, it was impossible to do full justice to so many correspondents; but whoever will carefully read the Report from beginning to end, can hardly fail to find a great deal to instruct and interest him. Congress has ordered 130,000 copies to be printed and bound for general distribution, and no one should indulge the least hesitancy in writing to the representative in Congress from his district for a copy. The whole is already stereotyped, and if another 100,000 copies should be printed for gratuitous distribution over our thirty-one States and five Territories, it would cost only $33,000 of the *fifty millions* now annualy expended by Congress. The great farming interest shares less in the funds of the General Government than any other, because farmers ask for nothing whatever. However the fact may be regarded by our readers, more than three-fourths of the fifty-two millions which will be paid into the National Treasury in the year 1851, will be dug from American soil, and far more to its injury than is generally believed.

The Report for 1850 does not contain the agricultural statistics of the U. S. Census of that year, for they were not collated and ready for the press. Among its essays is one of considerable length, on "*The Study of Soils*," from the pen of the proprietor of this journal. Of the merits of this performance it does not become us to speak; but we do not hesitate to commend a paper written by Mr. J. J. Thomas, of Macedon, N. Y., on "*Fruit Culture*," a valuable contribution to our popular literature on that subject. The aim in preparing the document, has been to make it useful to plain, practical farmers, and not one line has been inserted for show. Farmers are its authors, and they will know how to estimate its value.

◆

Our friends ordering the Farmer will be particular in giving the name of the Post Office, County, and State; also, in writing names plain, as by this much perplexity may be avoided to ourselves and subscribers.

Terms—Fifty Cents a year for single copies; *five copies* for $2, being *forty cents each;* and *eight* copies for $3, being *three shillings each*, and any greater number at the same rate.

◆

Many articles, some of them in type, we are compelled to omit; among them several answers to inquiries, which will appear in our next.

◆

Inquiries and Answers.

Cure for Garget in Cows.—Your subscriber, Mr. Greaves, inquires for a cure for Garget in cows. For the benefit of Mr. G. and others, I would say that a piece of poke root (or skoke root, as it is sometimes called,) the size of a walnut, given in a potato or apple occasionally, will cure. Give three mornings, and skip three, until a cure is effected.

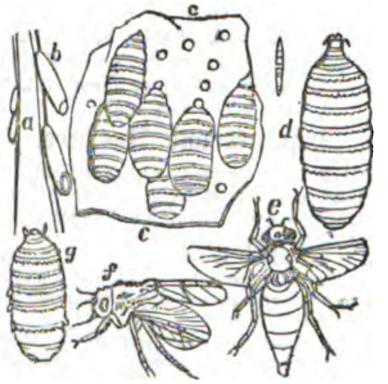
For a preventative, give your cows a little saltpetre with their salt, say two pounds to a bushel of salt. *Oneida Lake, Nov.*, 1851.

A strong decoction of smart weed applied to the udder will assist in the cure. We have received nearly a score of letters in answer to the inquiry on this subject, all nearly similar to the above.

Bots and Colic in Horses.—Myself, as well as others, would be pleased to see some of the best remedies (those that can be relied on,) for the Bots or Grubs, and the Colic, in horses. We are much perplexed sometimes to know how and what to administer for the relief of that noble animal. Edw. R. Coke.—*Burnt Ordinary, Va.*, 1851.

We have no doubt that many horses have been doctored for the Bots, and perhaps some have died under the treatment, while others have recovered in spite of it, when colic, constipation, inflamation of the bowels, or some other disease, has been the cause of all the difficulty. "*Bots*" is a favorite theme with horse doctors of more pretensions than knowledge. The best English authorities agree in stating that the Bots is never injurious to the horse, causing no disease, or even symptoms of disease, while others claim that they are injurious. But even if this is so, we hardly know how the insect is to be dislodged from the stomach, for Cole says they have lived in rum twenty-four hours, a decoction of tobacco eleven hours, spirits of tupentine forty-five minutes, and in brine ten hours, without any effect. Their entering the stomach may be prevented to some extent by rubbing the parts where the eggs are observed, with a cloth and warm water, or applying grease or oil. To make the matter plain, we copy the full description and engraving, showing the fly, the egg, and the bots as they are attached to the stomach, from Youatt's work on the Horse:

"In the spring and early part of the summer, horses are much troubled by a grub or caterpillar, which crawls out of the anus, fastens itself under the tail, and seems to cause a great deal of itching or uneasiness. Grooms are sometimes alarmed at the appearance of these insects. Their history is curious, and will dispel every fear in regard to them. We are indebted to Mr. Bracy Clark for almost all we know of the bot.



a and *b*, the eggs of the gad-fly adhering to the hair of the horse.

c, The appearance of the bots on the stomach, firmly adhering by their hooked mouths. The marks or depressions are seen which are left on the coat of the stomach when the bots are detached from their hold.

d, The bot detached.

e, The female of the gad-fly, of the horse, prepared to deposit her eggs.

f, The gad-fly by which the red bots are produced.

g, The smaller, or red bot.

"A species of gad-fly, *e*, the œtrus equi, is in the latter part of the summer exceedingly busy about the horse. It is observed to be darting with great rapidity towards the knees and sides of the animal. The females are depositing their eggs on the hair, and which adhere to it by means of a glutinous fluid with which they are surrounded (*a* and *b*). In a few days the eggs are ready to be hatched, and the slightest application of warmth and moisture will liberate the little animals which they contain. The horse in licking himself touches the egg; it bursts, and a small worm escapes, which adheres to the tongue and is conveyed with the food into the stomach. There it clings to the cuticular portion of the stomach, *c*, by means of a hook on either side of its mouth; and its hold is so firm and so obstinate, that it must be broken before it can be detached. It remains there feeding on the mucus of the stomach during the whole of the winter, and until the end of the ensuing spring; when, having attained a considerable size, *d* and being destined to undergo a certain transformation, it disengages itself from the cuticular coat, is carried into the villous portion of the stomach with the food, passes out of it with the chyme, and is evacuated with the dung.

"The *larva* or maggot seeks shelter in the ground, and buries itself there; it contracts in size, and becomes a chrysalis or grub, in which state it lies inactive for a few weeks, and then, bursting from its confinement, assumes the form of a fly. The female, becoming impregnated, quickly deposits her eggs on those parts of the horse which he is most accustomed to lick, and thus the species is perpetuated.

"There are several plain conclusions to be drawn from this history. The bots can not, while they inhabit the stomach of the horse, give the animal any pain, for they have fastened on the cuticular and insensible coat. They cannot stimulate the stomach, and increase its digestive power, for they are not on the digestive portion of the stomach. They cannot, by their roughness, assist the trituration or rubbing down of the food, for no such office is performed in that part of the stomach—the food is softened, not rubbed down. They cannot be injurious to the horse, for he enjoys the most perfect health when the cuticular part of his stomach is filled with them, and their presence is not even suspected until they appear at the anus. They cannot be removed by medicine, because they are not in that part of the stomach to which medicine is usually conveyed; and if they were, their mouths are too deeply buried in the mucus for any medicine, that can be safely administered, to affect them; and, last of all, in due course of time they detach themselves, and come away. Therefore, the wise man will leave them to themselves, or content himself with picking them off when they collect under the tail and annoy the animal.

"The smaller bot, *f* and *g*, is not so frequently found.

"Of inflamation of the stomach of the horse, except from poisonous herbs, or drugs, we know little. It rarely occurs. It can with difficulty be distinguished from inflammation of the bowels; and in either case the assistance of the veterinary surgeon is required."

The English remedy for colic, is turpentine, opium, and aloes, given in warm strong beer—4 drams of aloes, 1 oz. of turpentine, 1 oz. laudanum, in 1 pint of beer. YOUATT says this will generally cause the disease to cease almost as suddenly as it appeared. If the disease should not yield speedily, he recommends bleeding to prevent inflammation. The belly should be well rubbed with a brush or warm cloth, and clysters of warm water should be injected. We have already devoted so much space to this article, that we can not say more of the colic in this number, but may in our next.

◆

PREPARING BONES FOR MANURE.—I wish to gain information through the columns of your excellent paper, as to the best mode of using bones as a manure; also of preparing them for use. By doing so, you will oblige A SUBSCRIBER.—*Adams Center, N. Y.*, 1851.

We have on file several inquiries similar to the above. We shall endeavor to answer one and all. Bones should be crushed to fragments before being applied to the land, otherwise they decay very slowly. Ten bushels of crushed bones will show a better effect, for many years, than one hundred bushels uncrushed. It is no uncommon thing in England to see a double crop of turnips as the effect of the application of bone dust, even twelve years after its application. Bones, if well seasoned, can be ground in a plaster mill. We have known them to be kiln-dried for this purpose. If they are fresh, the work of crushing can better be done at an oil mill.

Another mode of preparation is to boil the bones in a strong lye until they fall to a powder, then mix the lye and bones with fine dry loam. After the water has evaporated, the mixture may be drilled in with wheat, turnips, and other crops; or sown broadcast. A small quantity of bones applied in this way, produces surprising effects.

Still another method of preparing bones is to dissolve them in a solution of oil of vitriol. Two bushels of bone dust dissolved in vitriol, will produce a greater effect the first year than twelve applied as dust. Sulphuric acid (oil of vitriol) costs but from 2½ to 3 cents per pound. We give the process in detail, in the words of Professor NORTON:—"To every 100 lbs. of bones, about 50 to 60 of acid are taken; if bone dust is used, from 25 to 45 lbs. of acid is sufficient. The acid must be mixed with two or three times its bulk of water, because if applied strong it would only burn and blacken the bones without dissolving them.

"1. The bones are placed in a tub, and a portion of the previously diluted acid poured upon them. After standing a day, another portion of acid may be poured on; and finally the last on the third day, if they are not already dissolved. The mass should be often stirred.

"2. Another good way is to place the bones in a heap upon any convenient floor, and pour a portion of the acid upon them. After standing half a day, the heap should be thoroughly mixed, and a little more acid added; this to be continued so long as necessary. It is a method which I have known to prove very successful.

"In either case the bones will ultimately soften and disolve to a kind of paste; this may be mixed with twenty or thirty times its bulk of water, and applied to the land by means of an ordinary water cart. Used in this way, it produces a wonderful effect upon nearly all crops.

"A more convenient method in most cases is to thoroughly mix the pasty mass of dissolved bones with a quantity of ashes, peat earth, sawdust, or charcoal dust. It can then be sown by hand, or dropped from a drill machine. Two or three bushels of these dissolved bones, with half the usual quantity of yard manure, are sufficient for an acre. This is therefore an exceedingly powerful fertilizer. One reason for its powerful effect is, that the bones are, by dissolving, brought into a state of such minute division, that they are easily and at once available for the plant. A peculiar phosphate of lime is formed, called by chemists a *superphosphate*, which is very soluble; and in addition to this we have the sulphuric acid, of itself an excellent application to most soils."

◆

TO PREVENT HOGS ROOTING.—I saw in a number of the Prairie Farmer, a short time ago, an article stating that by cutting the tendons (or some other term.) that supports the rim of a hogs nose, it destroys their properties of rooting, without injuring the hog. If this is the case, and you could and would let me know how it can be done, you would oblige me, and probably a good many of the readers of the Genesee Farmer. H. JENNINGS.—*Wyocena, Wis.*, 1851.

We have never seen the experiment tried of cutting the nasal tendon, or stout muscle on the top of a pig's nose, to prevent his rooting. The probability is that the remedy will prove successful. It operates on the principle of "ham-stringing." Cut square across the top of the nose a little back of the rim.

◆

WEEVIL.—The insect contained in a letter from J. D. DAVIS, of Reading Center, N. Y., was so compressed and broken, that all we can say is that it was a fly and not a weevil. We will give some account of this insect soon.

Leached Ashes and Rotation of Crops.—Are leached ashes that have laid from thirty to fifty years exposed to the weather, worth hauling five miles as a fertilizer? If so, how should they be applied?

The following system of rotating crops, I have adopted, and thus far with an increase both in quantity and quality. Think you the advantage will be lasting? For wheat, I have three lots; one of which I summer fallow, another take a crop of wheat from, and the third I pasture—always seeding with clover, and applying about two hundred bushels of plaster to the acre. As I summer fallow the lot which I pastured the preceding year, I have a good turf and a heavy crop of clover to turn under. I do not calculate to pasture my fallow till after it is broken, but it is hard sometimes to keep the cows out. For other crops I have no system, only that I plow and grow three crops of different kinds—then seed, plaster, and manure, for meadow or pasturing, three years. A Subscriber of the Town of G.

On good roads it will pay to haul leached ashes five miles; they should, however, be mixed with lime before their application, unless the soil abounds in calcareous matter. Eventually, your wheat and clover rotation will exhaust your land, if you do not renovate it occasionally with manure or ashes, to restore potash and bone earth removed in the seeds of wheat.

Clover draws the earthy ingredients from the subsoil for the benefit of wheat plants; but the supply will not last a century without adequate restitution. Beware of "clover-sick" fields.

◆

Gas Lime.—Will you be so kind as to inform me of what value the gas limes are to put on to land to grow fruit trees, that needs lime in some form or other. At this place I can obtain stone lime, fresh and fine, for $10 per hundred bushels. At the gas works in this city, they have a large quantity of lime that they have used for purifying the gas, and which was the best of the Onondaga lime, which they will sell cheap. There is no one here to tell me about it, and not seeing any article in the Farmer, I write you that I may get some correct information.

The soil is a strong clay loam that has produced wheat twenty-five years with only two or three crops of clover, which now yields about twenty-five bushels to the acre. But as I am to put it to different purposes, I thought I had better supply some of the phosphates first. It is troubled with grubs—the larvæ of the May bug, or a large white grub with brown head—that gnaw the roots of small trees till they die. I have lost $500 worth of plants this year by its depredations. To destroy this insect would be gratifying to me. I have sown thirty bushels of salt to the acre, and plowed it under. I intend to plow it again, following with the subsoil plow, that I may make the soil sixteen inches in depth.

Now, for manure we shall use muck from a swamp, that has been sweetened with lime and salt, adding some plaster to supply the sulphur.

I will close this letter, which is much longer than I intended to write at first, but I feel that I am excused when I read some of the interesting articles on the relation of science to agriculture that may be found in your paper. Charles P. Cowles.—*Syracuse, N. Y., Oct.*, 1851.

There is more or less organized nitrogen in the coal from which gas is made, and the lime used to purify it usually contains ammoniacal compounds which, so far as they are present, are far more valuable for agricultural purposes than lime itself. Buy the gas lime as cheap as you can, and test its value by careful experiment.

◆

Mules.—Will some of your correspondents inform me through the columns of your valuable paper, why mules are not reared to a greater extent in this State. It is stated that they are very profitable, easily reared, and a ready sale at two years old, at prices ranging from $75 to $100 each. K. —*Oneida Lake, N. Y., Nov.*, 1851.

HORTICULTURAL.

(R. L. C., King's Ferry, N. Y.) The *Filberts, Madeira nuts*, and *Almonds*, of the shops will grow if sound and fresh. Sow in the fall, in any good, dry, friable soil, cover two inches deep. If you cannot plant in the fall, lay them in a thin layer in the ground, and cover with earth three or four inches deep till spring. *Doucain and Paradise Stocks* are not raised from seed, but layers; most of those used in this country are imported. *Mahaleb* seeds can scarcely be procured in this country, but the stocks can in the nurseries.

(F. S., King's Ferry.) The various kinds of dwarf stocks can be obtained in the nurseries here, at $2 to $3 per 100. *Mazzard cherry* and *Pear stocks* can be obtained at prices you will find in the nurserymen's catalogues. *Spanish chestnuts* are not to be had here; young plants can.

(S. W. R.) The "Fruit Garden" is sold at $1.25, and the postage to you would be 20 cts. if pre-paid. The present postal law is unfavorable to the transmission of books by mail.

◆

Will you be so kind as to answer a few inquiries in the Genesee Farmer, and oblige a subscriber.

1. Does the Angers Quince produce fruit superior to the Orange or Portugal?

2. Is the Striped Madelaine Pear tree as hardy and productive as the Madelaine? Does it succeed well on Quince?

3. Is it better to whip-graft Quince stocks with pears that have failed the first season to grow from bud, and transplanted in the fall again, than wait until the next fall and bud again? S. B.—*Susquehanna Co., Pa., Nov.*, 1851.

1. We have not yet fruited the Angers Quince, but it is spoken of by cultivators of Angers as being very good.

2. The Striped Madelaine pear is, according to our experience, as hardy as the common one, but not quite so vigorous. It is productive and succeeds well on the quince.

3. You may get a tree *sooner* by grafting next spring the stocks on which the buds have failed the past summer, but you will have better trees in the end, if you wait and bud them next season, especially if they be transplanted. If intended to graft, they ought not to have been transplanted.

◆

The Nursery Business in Iowa.—A correspondent writes us from Maquoketa, Iowa—"There is one great drawback to the nursery business here, and that is *winter killing*. There is not more than one-third the varieties of apples that will stand root-grafting in this latitude, 42½ deg. Some nurserymen have lost thousands of dollars by it."

Will some of our friends in the west, who have tested the hardiness of varieties in climates similar to Jackson county, Iowa, communicate some of their experience. This matter touches upon a subject of great importance to the fruit growers of this country, viz., the ***adaptation of varieties to certain climates and localities.***

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A MONTHLY JOURNAL OF

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ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

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VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, JR., EDITORS.

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January, 1852.

STEREOTYPED BY. J. W. BROWN, ROCHESTER, N. Y.

THE GENESEE FARMER

Vol. XIII. ROCHESTER, N. Y., FEBRUARY, 1852. No. II.

AGRICULTURAL CHEMISTRY.

NUMBER II.

In the January number of the present volume we offered a few remarks on what was termed "an ever-active force in all matter, which tends to the formation of compound bodies." This force was also spoken of as some times "quiescent;" and the question naturally arises in the mind of the reader, how a power which is *ever*-active can be occasionally quiescent or inactive. This seeming contradiction is explained by stating that a chemical force is ever-active toward some bodies, while it is quiescent toward others. Thus, when iron and oxygen unite and form what is called the prot-oxide of that metal, the force or affinity that keeps these two elements together as a compound body, is ever-active; but in reference to most other bodies this force is entirely quiescent. If, however, a little vinegar be poured upon a simple compound of iron and oxygen, the acid and oxydized metal immediately form a chemical union, producing a salt called acetate of iron. In this phenomenon, it is known that the vinegar and the oxide of iron were each compound bodies, whose natural forces were active and brought them into a state of permanent union, so far as any chemical union can be permanent.

In the language of chemistry, all minerals that combine with acids are called *bases*; and different acids and bases, and other substances, have unequal affinities, which give rise to all the diversities that are found in the mineral, vegetable, and animal kingdoms. If each element in the material world were attracted equally toward all others, in a chemical sense, all bodies would be compounded alike, without the least variety in nature; and life would be impossible as we now see it, and all matter would be a perfect chaos again. To bring order and harmony out of confusion, it is safe to say that immutable laws to govern all possible changes in matter, are indispensable. The most superficial observation enables us too see the workings of these laws; and to no other class is their study more important than to the cultivators of the earth. In its application to tillage and husbandry, chemistry is so vast a subject that we hardly know how to give it a proper introduction to the reader. As we understand it, it is truly a revelation not only of the workmanship, but of the will of the Creator. The laws that govern the universe, and all its atoms, are his laws. To present rural science as illustrated by nature, in any other light, would do injustice alike to the Law-giver and the law-breakers. Man's very existence depends on physical laws, and these can not be separated from his duties, or moral obligations. Chemistry and religion are as close together as the world and its maker; or as the body of man and his reason and conscience. To impoverish the natural fruitfulness of the earth is to do mankind a great injury, without any excuse whatever. To avoid committing this wrong, a knowledge of the laws of Providence is indispensable. Ignorance of divine laws (and all chemical or natural laws are divine in their origin,) may be a crime, and is generally a fault. Infinite Wisdom is not the friend of ignorance, but of knowledge; and the clergymen and pious persons who do not exert themselves to promote the universal study of chemistry and other branches of natural science, fall far short in their duty. Why continue a deep shade between the human soul and its God? Physical man must look through nature to see the Divinity beyond; and no one can diligently study natural phenomena, as the shepherds of old watched the constellations at night, and not become less an animal, and more a Man.

The extreme *divisibility* and perfect *solubility* of matter prepare and adapt it to the uses of the scientific husbandman in feeding his growing crops and growing animals. There are a thousand ways in which the extreme divisibility of solid matter may be demonstrated. If a particle of silver only the one-hundredth part of a line, or the twelve-hundredth part of an inch in extent, be dissolved in nitric acid, it will render distinctly milky 500 cubic inches of a clear solution of common salt. Hence the magnitude of each atom of silver can not exceed, but must fall far short of a billionth of a cubic line. To render the idea of this degree of division more distinct, says Sir ROBERT KANE, "it may be stated that, a man to reckon with a watch, counting day and night, a single billion of seconds, would require 31,675 years." In the organized kingdoms of nature even this excessive tenuity is far surpassed. An Irish girl has spun linen yarn so fine that a pound was 1432 miles in length, and of which, consequently, 17 lbs. 13 oz. would girt the globe. A distinctly visible portion of this thread could not have weighed more than the one hundred and twenty-seven-millionth of a grain; and yet each thread contained many fibres of flax, and each fibre was a mass of many cells, and each cell was composed of several distinct elementary bodies, such as carbon, oxygen, hydrogen, and the incombustible minerals which appear as *ashes* when flax is burnt. Microscopes have revealed organized creatures so small that it is said a million of them in one mass presents an object too small to be seen by the naked eye! Although we question the entire accuracy of this statement, yet, that animalculæ have a perfect organization, and their circulation of blood and its particles are as complex as those of the elephant, there can be no reasonable doubt. We should never forget that both the astronomer and the microscopist are indebted to art and science for the optical instruments that reveal planets and suns in the far off regions of the heavens, and living things in air and water, and their remains in rocks and mountains, before unknown. The divisibility of matter and its plasticity being comprehended, we are prepared to consider its solubility in water.

The laws which govern the solution of solids are not sufficiently known to admit of generalization. They are, however, resorted to in chemical researches and analyses, with eminent success. As was stated in the January number, the pulverization, or comminution of solids invariably promotes their solution in water; but why chalk will not dissolve, and why the muriate of lime will, are alike unknown. A critical knowledge of the relative solubility of different substances is exceedingly valuable to the chemist; nay, without this information, he can not be regarded as worthy of the title of chemist. Water is only one of many liquids used to dissolve both simple and compound bodies; acids, fused alkalies, ether, alcohol, and oils, are among the more common solvents, which are often aided by heat in the laboratory. Water, however, is now regarded as an universal solvent—dissolving all minerals when finely divided. Decaying vegetable and animal substances on the surface of the ground, yield carbonic acid and others to water, which greatly augments its solvent powers. It is sometimes charged with mineral acids, especially sulphuric, or the oil of vitriol. This acid is formed by the decomposition of iron pyrites, which is a compound of sulphur and iron. In this process the oxygen of the air or in water combines chemically with sulphur in the proportion of 24 parts of oxygen to 16 of sulphur. There are springs in Monroe county, N. Y., which contain sulphuric acid enough to render the water quite sour. Water charged with this acid, no matter from what source, coming in contact with lime either in soils or rocks, produces gypsum. In some localities, crystalized plaster is formed so rapidly in the manner indicated, as to throw down, like frost, stone walls, and crack the walls of brick and stone buildings. When this phenomenon was first observed, much speculation was had "on the growing of beds of gypsum." Plaster can grow in soils and beds so long as lime and sulphur last, but no longer. Lime and sulphur are indispensable elements in all soils, and every farmer should be able to determine by the use of the appropriate tests, the existence of gypsum or lime in the land he occupies, whether in meadow, pasturage, or tillage. This information we shall give in the present volume, when we come to describe the analysis of soils. To the million, a knowledge of chemical principles is more important than any description of analytical manipulations, which not one in a thousand will ever practice. But many operations in the laboratory are so simple that any farmer may perform them with success, after a little study. If students in academies and advanced classes in public and private schools, were instructed in the uses of filters and solvents, to separate dissolved from undissolved substances, and in the application of reagents as tests in agricultural researches, an important step would be taken in the right direction. Because a youth can not reach the highest eminence in a science, there is neither sound sense nor decent logic in the inference, that he should make no effort to learn what he can of said science. Facts are the basis of all knowledge, and the habit of ascertaining and recording facts in rural affairs, both in practice and theory, should be encouraged from boyhood to old age. Apply the inductive system of reasoning and research to agriculture, and the tens of thousands of able men engaged in it will rapidly expose and correct the errors of the past, and enlarge the bounds of what is already known in tillage and husbandry.

Specific gravity are words used in chemistry to denote the relative weight of any given volume of a solid, liquid, or gaseous body. In all weights and measures, something is arbitrarily assumed as a *standard* with which other things are to be measured or weighed. Pure water, when the thermometer is at 32 deg., or at the freezing point, and the barometer at 30, furnishes a standard much used by chemists. Thus, a bottle that will hold an ounce (480 grains) of distilled water, will contain only 343 grains of sulphuric ether, which is much lighter than water. It will, however, hold 885 grains of oil of vitriol, or sulphuric acid. If we make water a unit, and place it at 1000, the specific gravities of ether and sulphuric acid will stand thus:

	Grains.	*Sp. Gravity.*
Water,	480	1000
Ether,	343	715
Sulphuric acid,	885	1845

To save the trouble of calculation, the bottle in use is generally made to hold 1000 grains of pure water, and then filling it with the fluid to be tried, the weight gives directly the specific gravity. By means of a light but more capacious glass globe, the comparative weight of gases is ascertained. A gas must be either perfectly dry, or saturated with moisture. Assume that the globe contains 28 cubic inches, and when filled with dry common air of a known temperature, (32 deg.,) weighed 656 grains. With the air removed, it might weigh 647.5 grains, showing a loss of 8.5 grains. Filled with dry carbonic acid at the same temperature, it would weigh 660.3. If we subtract the weight of the globe (647.5 grains) from the same filled with carbonic acid gas, the difference is 12.8, while that of common air is 8.5. Call the latter 1.000, and the specific gravity of carbonic acid gas is 1.506. Variations in temperature and barometric pressure change the relations of gases very materially.

How to determine the specific gravity of soils and other solids, will be explained in our next.

"THE LIMITED DURATION OF VARIETIES OF PLANTS."

SINCE our article on this subject was written, the Horticulturist contains another from Mr. TOWNLEY, which the editor of that journal pronounces, not unjustly, "one of the most interesting it has published." We have read the facts and argument of Mr. T. with close attention, and see no reason to alter the judgment we ventured to express in our last. The question is not whether seedlings, and plants, and trees, propagated by buds, will deteriorate, for it is generally conceded that both will, but whether a healthy bud from an aged tree, having equal advantages of soil and climate, may not live as long and do as well as *a new tree*, as one grown from a seed from the tree that produced the bud? Here is an apple tree, itself a seedling, which is one hundred years old; and the question to be decided is, what advantages for the production of a new tree have its seed over its buds? If the vital principle in its buds is feeble from great age, or a want of food, the same is true of its seeds. In cellular structure they are alike; and they are alike in composition and function after taking root in the ground.

How does it happen that seedling potatoes are subject to the rot as well as those grown from tubers, if the effect is confined to the propagation from tubers instead of seeds? We found it impossible to answer this question to our own satisfaction, and hence we doubted the soundness of the "bud theory" altogether. Seedling onions, carrots, and cabbages, often rot prematurely, especially so far south as Georgia. Indeed, they appear to decay there sooner than potatoes, even before carrots and onions are pulled. Had the plants produced from seeds, in starting new races of potatoes, been entirely exempt from the malady, while those cultivated from tubers were subject to it, such evidence would have gone far to show that nature had imparted less vital force to buds than to seeds. But, let seedlings be as long abused, in one form and another, as the tubers of potatoes and other plants have been, and also all fruits propagated by buds, and the seedlings so treated would show equal deterioration and proneness to early dissolution. It is better to have no theory at all on the subject of budded and seedling fruit trees, and esculent tubers, than one which, if not evidently erroneous, is more than doubtful. To improve all organic structures, all vital parts, one needs a knowledge of chemistry, anatomy, and physiology, in their application to the living beings whose constitutional vigor and enduring powers are to be changed for the better. Without considerable knowledge of the principles of organic chemistry, one cannot duly understand the relations that earth, air, and water, bear to cultivated plants, fruits, and animals; and without some acquaintance with their anatomy, some information in reference to the functions of their numerous organs, or their physiology, he cannot operate otherwise than in the dark in feeding his crops, his stock, and in improving his land. A man may produce, after a fashion, the flesh, bones, and feathers, of one hundred fowls or turkeys in a yard, without the remotest idea of the elements which nature demands and consumes in their healthy growth. Empiricism or accident may have given him valuable information on the subject; but where we meet with one person who really understands the art and science of manufacturing eggs and poultry in the most economical manner, we find ninety-nine who have the trade to learn. So it is in fruit culture, grain culture, potato culture, and grass culture.

Never, until farmers are willing to study the laws of nature which govern the organization, and the extension from generation to generation, of the plants and animals which they labor to produce, can they make substantial progress in their profession. The intelligent reader knows how little has been done in the United States to foster the critical study of every department of agriculture and horticulture. We depend on LOUDEN, KNIGHT, LINDLEY, LIEBIG, JOHNSTON, BOUSSINGAULT, and other Europeans, for nearly all our knowledge of rural science. Cannot original researches be made under a republican government as well as under monarchies?

CULTURE OF FLAX.

MAN of all animals is the only one who requires and is able to provide himself with clothing; and it is in direct proportion to his advancement in civilization and the arts, that he clothes himself with garments agreeable to the feelings and pleasant to the sight. The animal and the vegetable kingdoms furnish him with the raw material from which he makes his beautiful fabrics — the former supplying him with wool and silk, and the latter with cotton and flax. We propose to confine our attention at this time to the last.

Flax is supposed to have been brought originally from the alluvial soils of Egypt formed by the overflowing of the Nile, where from remote antiquity it has been cultivated, spun, and woven. Egyptian mummies embalmed 1200 years B. C. are found wrapped in swaddling clothes of fine *linen*. Its introduction from this warm to the colder climates, has materially improved the fibre and rendered it fitter for the manufacture of articles of fine texture. A cool, moist, and equitable temperature is best adapted to its growth, though it is grown at present to a greater or less extent in all the northern countries of Europe, in Italy, Sicily, Egypt, and to a considerable extent in Ireland and England, where great efforts have latterly been made by government to extend its culture so that it may afford employment for its superabundant labor. The amount now raised in Ireland is estimated at 25,000 tons. The total amount of flax consumed in the British isles is about 100,000 tons per annum. Of this Russia furnishes about 70 per cent.; but it is chiefly of a coarse texture, selling for about $225 per ton, whereas Belgian is often sold from $500 to $700 per ton: it should therefore be the chief aim of the cultivator not so much to grow quantity but quality.

The soil best adapted for its growth, is a dry, deep loam, with a clay subsoil; and, as a general rule, all soils need under-draining for its profitable production. The preparation of the soil is of great importance. It should be quite free from weeds, and be finely pulverized to a considerable depth, as the fibrous roots of the flax plant, if they meet with no obstruction, often penetrate to a depth of thirty inches in a straight line. A good plan is to sow it after wheat. Directly after harvest, the wheat stubble should be dragged with a heavy harrow, which covers the small seeds, causing them to germinate. In about three weeks it should be well and deeply plowed: this will kill all the annuals that have germinated; but it should be dragged or cultivated at intervals in the fall, so as to destroy as many of the perennial roots as possible; and it would be advisable, as late in the fall as possible, if the weather be dry, to give it another deep plowing, so as to leave it *rough* for the winter. As soon as it is sufficiently dry in the spring, it should be dragged and rolled, and then immediately before sowing it should be again plowed, leaving the land as level as possible; a drag should precede the sower, and a light one with thick set teeth should be used to cover the seed.

The quantity of seed per acre is a matter of importance, depending on the condition of the soil and the object of the grower. If seed alone is the object, one bushel will be sufficient, as thin sowing causes the plant to throw out branches which bear abundance of seed, but the flax is of a very coarse, inferior kind. The richer the land the less seed is required, as the plant will branch more. But if *flax* is required, two and a half bushels (or 126 lbs.) is about the proper quantity. If the soil is rich, three bushels should be used; if poor, two bushels will be sufficient; the object being to prevent the plant from branching out and to obtain a tall and slender stem.

Great care should be taken to obtain *clean* seed. Choose that which is shining and slippery, not too plump, and of a brownish red color. It should be sown as early in April as the weather will permit; but it is better to wait till the soil is dry and warm, even if it should not be sown before the first of May.

The most critical time of the flax crop is before the plant has covered the ground —

dry weather and a hot sun often prove very injurious. The plant flowers about the middle of June, its delicate blue blossoms presenting a very beautiful appearance. Hail storms and heavy rains are now to be dreaded.

If the crop is grown entirely for the seed, it should be allowed to get fully ripe; but if flax is the object, experience proves that it should be cut or pulled before fully ripe; for although the seed will not be so full and plump, yet the increased fineness of the flax fully makes up for it. The Dutch method of ascertaining when it is ready to cut is as follows: "A full grown stem is selected, and the ripest capsule is cut horizontally with a sharp knife. If the interior of the seed pickles is found to be firm and of a dark green, the flax is considered fit for pulling."

In another number we propose a consideration of the best methods of preparing the flax for market, and also the most profitable way to dispose of the seed.

EXPERIENCE IN POTATO CULTURE.

BY A CORRESPONDENT AT JUNCTION, ILL.

By your leave I will give you a portion of my experience for the past season. On some high ground, level and rather worn, well manured and plowed the previous fall, and plowed again immediately before planting, I marked out a piece five rods square, and on the 23d of May planted it with potatoes, (Carters,) in drills about two feet nine inches apart; potatoes cut so as to leave two or three eyes in a piece and planted nine inches apart in the drills. The first three rows had unleached ashes put upon them at the rate of five or six quarts to the row. On the second three rows I put about the same quantity of air-slaked lime. The next three rows were salted, four quarts to a row. On the next three rows I put charcoal dust, six quarts to a row, and the balance of the piece was all ashed as the first three rows. Alongside this five rod square piece I planted in the same way, without ashes or any other application. When the potatoes were up six inches, I covered the first three rows with the scrapings of the barn-yard (all rotten manure) to the depth of about one inch; they were all treated alike in other respects. The result was, that the first three rows yielded four and a half bushels of sound potatoes; all the others, without material variation, yielded three bushels to each three rows; or about two hundred bushels to the acre for those not top-dressed, and three hundred bushels for the top-dressed rows—a gain of fifty per cent. to the latter. The potatoes were dug in the last week of October. Many *entirely rotten* ones were found—none *partially* decayed—no difference could be seen between those ashed and those not ashed. Not an unsound one in the lot at this date, (December 1st.)

I learn from the above that it will pay to top-dress potatoes—not much else.

I find that early planted potatoes in this county rotted as much as late planted ones; that potatoes shaded do not rot as much with some of our farmers as those not shaded; that Carter potatoes do not rot more than other potatoes, as I think I have the best crop in the county; that Mercer potatoes, early and late, were almost a total loss; and that even the Merinos did not escape the rot here this season.

BY JAMES B. SALLS, OF WEST POTSDAM, N. Y.

About the first of May I plowed a piece of green-sward, and on the 12th planted it with potatoes. On four rows I put in each hill a small handful of plaster; on four rows adjoining, and of the same length, I used no plaster. The difference during the season of growth was plain in favor of the plastered rows, and when dug they yielded six bushels; the rows not plastered, two and a half bushels. On the remainder of the piece I applied plaster to the hill at hoeing, and although an improvement, the result was not as favorable as when covered with the potatoes at the time of planting.

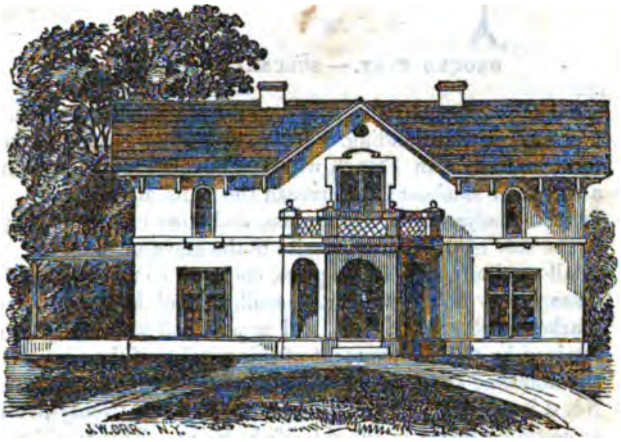
RURAL HOMES.

A SUBURBAN COTTAGE

In our January number we noticed a new book, entitled "Rural Homes," by GERVASE WHEELER, promising to give some extracts from the work in a future number. We are well pleased that works on rural architecture are multiplying, as this fact shows a demand for reading of this character. In every part of the country over which we have occasion to travel, we observe neat cottages, pretty "rural homes," springing up where but a few years ago nothing attractive in the form of a house could be seen. These may not all be designed in the most correct taste—some may exhibit redundancy of ornament, showing the want of such a work as Mr. WHEELER'S,—but still they are generally pretty and tasteful. These cottage buildings add much to the beauty of the landscape. Without further remark we give the promised quotation, selecting one of the cheapest and most convenient of the cottage plans:

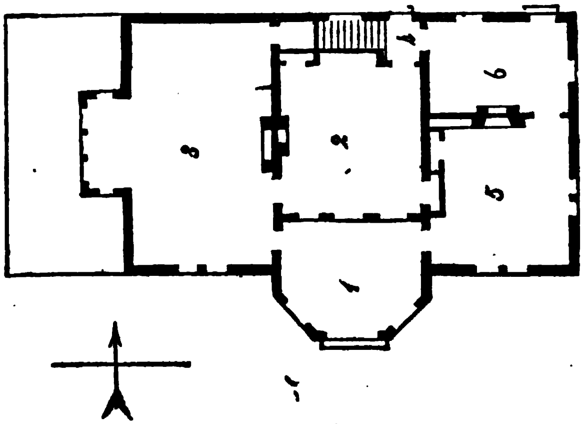
"A cottage home suited to the neighborhood of some small country town, and indicative of refinement and taste on the part of its occupants, may be made a very pleasing feature in the landscape. The illustration given here represents such a building, and I will proceed to describe it in detail, premising that its cost being but fourteen hundred dollars, it would be found within the means of most persons desiring such a house.

"The character of the exterior is architectural, partaking something of the Rural Italian. Its low walls, overshadowing roof, wide veranda, and projecting ombra in its southern front, give it an appearance of symmetry and refinement that adapts it to the occupancy of a family of elegance and taste. The material of which it may be constructed may be stone, brick, or wood. If of stone, no change may be made in its form or the nature of its details, unless perhaps making them heavier, and their marked features still more bold. If of brick, I would merely add a projecting face, one brick wide and projecting two inches round all of the windows, and a band running horizontally below the brackets or cantilevers of the roof about a foot deep, upon which they may rest. If of wood, the covering should be clap-boarding or smooth ceiling, not battens and perpendicular planking, as the leading characteristics of the composition are horizontal lines, and would be contradicted by any other direction in the lines of the covering. The roof, of sufficiently steep a slope to carry off all water or snow, should be shingled, and the gable over the center of the southern front be made water-tight with metal strips in the valley formed by its intersection with the slope of the main roof. The chimnies, formed of brick, rise in simple form from the ridge, and as they have no portion of the roof or building higher than themselves, need not extend above the ridge more than sufficient to ensure good proportion of height to width.



ELEVATION.—SUBURBAN COTTAGE.

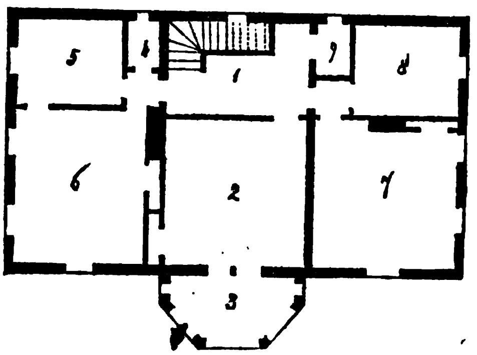
"Before proceeding further with the exterior of the building, I will describe the plan.



GROUND PLAN.—SUBURBAN COTTAGE.

"A peculiarity in this design is in the projecting half-octagon porch or ombra, which, from its position, serves the double purpose of a delightful and cool retreat, and that of an entrance-hall—it is marked on the plan, No. 1. In the winter, its sides might be filled with windows, and the opening in front with a glass door, thus making an enclosed vestibule or porch, and rendering the dining-room a very warm and comfortable apartment. From this porch are doors into the dining-room, No. 2; the parlor or library, No. 3; and the kitchen, No. 5; and according as a visitor's business in calling was to such and such a portion of the house, a door might be opened, thus saving the internal room necessary for a hall, and yet gaining all the advantages of such a portion of the building. The dining-room is a good-sized pleasant room, fifteen feet by seventeen, with French windows opening upon the ombra or porch at one end, and a recess for sideboard underneath the stairs at the other. Attached to this room are the necessary adjuncts of china, glass, and store closets, one by the sideboard, and the other in the side of the room opposite to the stove or fireplace. Back of the dining-room is a small vestibule, five feet square, enclosed so as to shut off the staircase, and being the passage way from the pantry, scullery, and kitchen, to the dining-room. This entry is marked in the plan, No. 4, and is provided with an outer door. The economy in space attained by the arrangement of this portion of the plan must be evident at a glance, and the domestic comfort and convenience ensured, seem to me to render it very desirable. No. 3 is a large, well-proportioned apartment, twenty-five by fifteen, exclusive of a large projecting window in the side of the room. This would serve as a parlor, drawing-room, or country library, as the taste of the occupants lead them to determine. The projecting window opens upon a large veranda extending along the side of the room, and from one side of this bay-window a portion of the veranda might, if thought pleasant, be enclosed, forming either a conservatory or a small summer study, attainable at very little additional cost. As this house might in many places be thought adapted for the dwelling of the clergyman of some small society, I would suggest that the room I have just described would very agreeably afford ample space for purposes of clerical use, and the small study thus attached (entered by a door from the side of the bay-window) might be provided with a flue in one of its sides, so as to be warmed by a stove in winter. Few houses of far greater pretension and expense have rooms so spacious and well-proportioned as those in this little cottage, and hence its desirableness for erection. No. 5 is a kitchen, back of which is a large scullery and wash-room, No. 6. Underneath the building, a dry and well lighted cellar (lighted from the one end and the rear side) might contain a store and flour-room, a larder, etc., with a flight of stairs leading thereto. Back of this building, I would propose an enclosed yard, containing wood-shed, and such offices as are better out of doors, and as the pleasant, occupied rooms are all on the other side of the house, the yard so enclosed might extend along its entire rear length, and being conveniently opened into by means of the enclosed vestibule at the foot of the stairs, would be easy of access from the living rooms. This enclosed yard would keep everything neat and orderly in appearance round the building, and give it a refined character in keeping with its more exposed exterior.

"The height of the rooms on this floor is ten feet in the clear, the walls to be prepared for paper, and the inside finish of doors and windows of the simplest, plainest description.



CHAMBER PLAN.—SUBURBAN COTTAGE.

"The sleeping accommodation in the floor above is adequate to the comfortable use of a small family, and is arranged as follows:

"No. 1 is a hall, well-lighted and roomy, containing the staircase from below, and from which open the doors into the several chambers.

"No. 2 is a large room over the dining-room and extending clear to a line with the front of the house, the recessed portion below being floored over. From this room a window opens upon a large balcony, No. 3, over the truncated projection of the porch below. The room is provided with a large closet for clothes, and a flue for a stove or fireplace.

"No. 4 is a large linen-closet, well-lighted, and formed by the small entry from the upper hall leading to rooms Nos. 5 and 6.

"No. 5 is a small chamber or dressing-room, in which might be a bathing apparatus, and serving either as a separate single room, a child's sleeping-room, or a dressing-room connected with the larger chamber, No. 6, which is over the library or parlor below, and is provided with a spacious clothes-closet and a flue for a stove or fire-place.

"No. 7 is over the kitchen, and has also a large closet and a fire-place, and No. 8 is a servants' sleeping-room. This room is shut off from the other chambers by an entry similar to that on the other side of the hall, and is sufficiently large for the purpose and is well-lighted and ventilated.

"No. 9 is a large store-room, well-lighted and airy—completing the accommodation provided on this floor, and the compactness and convenience of the plan must, I think, favorably recommend itself.

"The rooms on this floor extend partly into the roof. The walls are seven feet high to the under side of the plate, and the ceiling follows the slope of the roof sufficiently far to allow the rooms to be ten feet in the clear. The roof is so framed as to admit this, and by such an arrangement greater internal height and airiness are obtained, with more modest lowliness of the exterior. The sloping sides of the ceiling should be firred down so as to leave a space of dead air (the most perfect non-conductor) between the lathing and the covering of the roof; by this means the rooms will be always cool and the additional height gained be very valuable. The room over the dining-room having a gable over its ceiling would be a higher and more symmetrical apartment than the others, and hence might be reserved as the guest-chamber, its large balcony making it a very pleasant sitting place for ladies with their books or needle-work."

The author further remarks that the furniture and finish of such a house as this should be very simple. The tables and chairs of oak, maple, or birch; in the summer the floor should be covered with India matting, and in winter with carpeting of the pattern called mosaic, and the colors orange or crimson, and brown or black, except for the parlor, which should be a little more lively. The paper of oak pattern, or some other one-toned character.

"Around the bay or projecting window, a low chintz-covered seat, excepting where the windows open to the veranda floor, or the door (if there be one) leads into the study or conservatory, and as the space would be large, its center might prettily be occupied by a light and elegant work-table, or by a rustic flower-stand or jardiniere. The accompanying engraving shows a pretty rustic flower-stand just suited to such a situation, and as it is inexpensive and can easily be procured, I have given its representation. It is made of bark finished neatly and varnished.

RUSTIC FLOWER-STAND.

"The color of such a building should be light—whatever the general aspect and tone of coloring of the objects around, that let it be. If surrounded by trees, with a leafy background, its coloring should be warm and approach the cream; if standing more alone, with rocky foreground and bold crags near enough to be seen in outline and color, quench the warmth somewhat by deepening the cream to a light cool brown; if other buildings are near, and the background be circumscribed, give the building relief and its features distinctness by using more than one color thereon—covering the main block with a warm light tint and deepening the prominent portions, as window frames, cornices, brackets, doors, veranda posts, and ombra or porch.

"Sanding paint, or mixing sand therewith, besides assisting in its preservation, takes away from the oily glare and glisten of ordinary pigments, and by lessening the refracting power, gives to the surface of the building a softer and more pleasant tone of coloring. But I do not recommend this process in all cases, believing in no universal rule that admits not of exception; frequently where the detail is minute, the roughened appearance imparted by the use of sand gives a clumsy aspect to the part, and in all cases where sharpness of outline is sought to be obtained by any particular decoration of the construction, the use of sand would be perfectly inadmissable. By using the last coat of oil color thick and smooth, without boiled oil, or any fatty, or resinous substance, a flat, unshining surface may be obtained, more durable than a brighter, reflecting coat would be, and more pleasing in effect."

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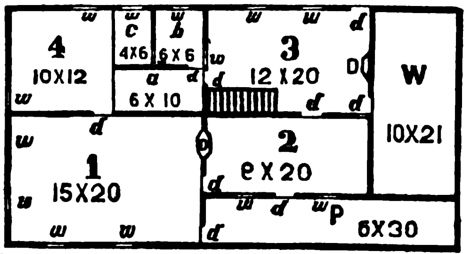
PLAN OF A FARM-HOUSE.—Observing that you devote a portion of your paper to this subject, I send you a plan of a house which will, I think, lessen the wants of a large number of the farming community. We are, at this age of improvement, rather selfish in regard to our pecuniary affairs, and it is a desire and an interest, and at times necessary, in erecting our farm buildings, to do it as cheap as possible. If you think the accompanying plan will be of use to any of your subscribers, it is at your disposal.



Description.—1, Parlor. 2, Dining room. 3, Kitchen. 4, Bed-room. W. Wood-house. P, Porch. *a*, Clothes-press. *b*, Pantry. *c*, Meal-room. *w*, Windows, *d*, Doors. D, D, Chimnies. S. A. T.—*Gorham, N. Y.*

BUTTER MAKING.

It is a very general opinion among dairywomen that more butter is obtained from a given quantity of milk when set in pans partly filled than when full. If this is true, it is well worth knowing; if not, a great deal of useless labor is expended. As the question has been often asked me, and I could give no answer, I determined to make the trial. As the result, so far as it proves anything, is of general interest, I send it for insertion in your paper. Such an experiment is valueless unless conducted with extreme care, and your readers might well doubt its accuracy unless shown that proper pains were taken. I will therefore give the particulars.

On the morning of the 20th November, the milk was strained all together into a tub. It was then dipped out into a pail holding five and a half quarts, which was filled carefully to the brim. Pains were taken that if any rich milk or cream had risen to the top, it should not be skimmed off, as it were, by dipping. The first pail full was turned into one pan, and the second into two, and so on alternately. There were eleven of the former and twenty-two of the latter. They were placed on the shelves of the milk-room alternately, lest the difference of position should affect the result. The milk stood till it thickened, which was about four days. The full pans thickened sooner than the other. As there was not quite enough cream of each kind for a suitable churning, and that not a particle be lost, considerable milk was taken off in skimming. The cream from the half filled pans was a *very little* warmer when put into the churn than the other. It could hardly be perceived in the cream, but it came sooner and was a *trifle* softer to work over. When weighed there was 6 lb. 7 oz. from the full pans, and 6 lbs. 2½ oz. from the pans half filled. This was an unexpected result, but I could conceive of no vitiating cause unless possibly the slight difference of temperature in the cream might affect it. The pans were of the usual size—the bottoms being about 11½ inches in diameter. The milk stood 2½ inches deep in the full pans. A pound of butter was obtained from 9⅝ quarts of milk.

To verify this experiment, or to detect mistakes, if any, I repeated it. On the mornings of the 29th and 30th of November, 210 qts. of milk were set with the same precautions as before—six quarts in the full pans and three in the others. This stood nearly a week before skimming. No difference of temperature could be perceived in the cream when put into the churn. If there was any difference in the butter, that from the full pans was a trifle softer than the other—the reverse of the former experiment. From the full pans there was obtained 12 lbs. 10 oz. of butter, and from the others 12 lbs. and nearly 1 oz. The difference in this case was about 4½ per cent., the same as in the former trial. The milk stood in the full pans 2.7 inches deep. A pound of butter was obtained from 8½ qts. It is all of three times as much work to skim the half filled pans as the others. The question then arose whether still larger dishes were not better. Another trial was made by setting 208 qts., with the same precautions as before, one-half in pans holding six quarts, and the other half in those holding twelve quarts. From the small pans was obtained 10 lbs. 15 oz., and from the larger ones 11 lbs. 3½ oz. The difference in this case, of 4½ oz., was about 2½ per cent. in favor of the large pans.

The reason that the full pans each time gave the most butter, I cannot give; but I think the result is owing to unequal evaporation. The amount of cream and skim-milk is much less than the new milk. The milk from one full pan and two half pans was measured, and that from the full pan was half a pint the most, or one-twenty-fourth of the whole. This is four and one-sixth per cent., about the same difference as in the butter. If this is not the reason, I can conceive of no other. L. N.—*Sherburne, N. Y.*

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The Value of Barn-Yard Manure.—It is now pretty generally admitted that the chief analytical criterion of the relative value of different kinds of manure is the amount of ammonia they contain. From several analyses by Messrs. **Lawes & Gilbert**, it appears that a "ton of rich box manure," or manure produced by fatting animals with rich food in boxes, contained 14½ cwt. of water and 5½ cwt. dry substance; the latter containing a large quantity of mineral matter, and nitrogen equal to 20 lbs. ammonia: while manure made by eating, treading, and wetting straw, and rotted to the same degree, contained the same amount of water with less than one-half the important minerals, and nitrogen equal to only 5 lbs. ammonia. Most farmers are apt to imagine that "a ton of manure is a ton of manure," irrespective of its origin; and think if they are about the same to the eye they will be the same to the plant: but it is not so. A ton of manure made by sheep eating clover hay, would be worth three tons of that made by eating straw; and a ton from the consumption of peas or oil-cake would be worth as much as eight tons of the straw-fed manure. The value of the manure depending, other things being equal, on the amount of nitrogen in the food consumed, and not so much as is sometimes supposed on the kind of animal producing it. **Joseph Harris.**—*Rochester, N. Y.*

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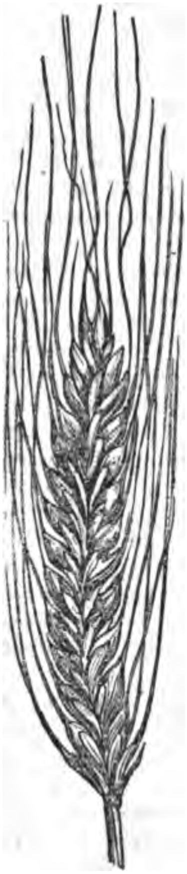

HESS BARLEY.

Hess Barley.—Enclosed I send you a head of barley, the only one I could find in my barn, the crop having been threshed out early in the fall. I think it is hardly a fair specimen, but it will serve to show you, if you have not seen the variety before, the difference between this and the common two rowed barley, which consists in the kernels being placed nearer together—the same number occupying between one-half and two-thirds the length of head of the other variety. The straw is also much shorter and stouter, and will stand well where the other is entirely laid. It is being disseminated rapidly in this vicinity, and is estimated by different farmers to yield from ten to 20 per cent. more than the other, especially on rich land. It originated in the adjoining town of Fenner, on the farm of **David Hess**, Esq., about six years ago. Three heads were discovered proceeding from one root among the common two rowed barley, which was planted and multiplied by him until he was able to sow two acres, I think, when he began to disseminate it among his neighbors. If you wish for a quantity of seed for distribution, I will send it to you. Perhaps a more full and accurate account of it may be obtained of Mr. **Hess**. **J. B. Morse.**—*Cazenovia, Madison Co., N. Y.*

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Growing Flax with Barley.—I will inform you of a practice which prevails here, of sowing flax with barley; it may be new to some of your readers. After the ground is plowed, two bushels of barley are sown to the acre and harrowed in; one peck of flax seed is then sown to the acre and cross harrowed. It is harvested and threshed together, and is easily separated when cleaning, by the flax seed passing into the screen-box. The barley seems to do quite as well as if no flax were sown. The past season, I had thirty bushels of clean barley and three bushels of flax seed to the acre. The land had been in corn the previous season, and was manured with stable dung and leached ashes. H. M.—*Lawrence county, Pa.*

Sheep Husbandry.

VERMONT AND THE WEST.

BY S. BIRD ROCKWELL, OF CORNWALL, VERMONT.

WHAT relation does Vermont sustain to the great west, on the important and deeply interesting subject of wool-growing; and what breed, or breeds of sheep, are best adapted to its wants and prosperity.

To the first of these inquiries we answer: Its relation is that of a vast reservoir to a distant jet or fountain; it is that of a mine to the production and circulation of the precious metals; or that of the vast and full ocean to the showers that fall in timely periods, for the refreshing of the parched and suffering earth. Vermont can, without boasting, challenge the world to produce a race of sheep surpassing hers in true and real merit. That class of sheep which will produce the largest yield of good wool and mutton from a given amount of feed, is undoubtedly the best. Vermont, in her celebrated Merino flocks, has such a class.*

It is an error to suppose that the Merino affords an inferior quality of meat. The greatest epicures in Brighton pronounce such an opinion unfounded in fact, and unsupported by reason; it is destitute of any basis in truth, and may be regarded as the dream of an Englishman, or a relic of the dark ages. For weight of fleece they are unrivalled. In 1840, Vermont produced more wool than Ohio, and yet had nearly one million less sheep. The saving to Vermont, in way of keeping, was nearly one and a half millions of dollars, as the estimated expense is $1.50 per head per annum.

Western farmers are now eagerly inquiring for some branch of agricultural industry that will give them better returns for labor and capital invested. Wool growing is that branch, and, in proportion as they obtain good sheep, so will they engage in this noble and lucrative employment. But from whence can they be obtained? Not from the north, not from the south, nor from the west,—but from the east. The breeders of choice sheep in Vermont, aided by a few good flocks now springing into note in the Empire State, must furnish this great field. Vermont has much of her own State to supply with better sheep. It is a mistaken notion, so generally obtained west, that all the sheep in Vermont are intrinsically valuable. The majority of the flocks in the State are indifferent in their character, and possess no peculiar merit. There is doubtless more thorough bred flocks in Addison and Rutland counties, than in all the rest of the State. The reputation of these counties is well earned and deserving. Vast outlays of capital and labor, during the last twenty years, is the corner-stone of this reputation. Money and time have been poured out like water, and no efforts spared to secure the best sheep that the world could boast of. We can but hope that this reputation will be guarded as a precious treasure. This eminent power and skill of producing stock sheep, is the cause of everything great in their position and history. It is the rude foundation of their fair Corinthian pile; and they are as much indebted to this as Egypt to her Nile, Athens to her schools, or Rome to her policy and arms. As a box of precious jewels let this reputation be preserved, and never suffered to tarnish by neglect or abuse. Shall it be so? We have had our fears awakened that it might prove otherwise. Under this reputation, very many indifferent sheep have been glossed over with oil and lamp-black, and taken West and sold for high prices. This may be news to some; others have been made acquainted with the fact to their sorrow. Some villains have attained such a degree of skill in manufacturing these pseudo Merinos, that it is well calculated to deceive good judges. At first it was done slyly; now it is perpetrated with fiendish boldness. It has gone too long unrebuked already. Such conduct calls for the execrations of all good men. It is not only unjust, but impolitic; and must assuredly re-act with retributive justice upon us. In the name of Vermont—in the name of justice—in the name of everything good and true—we disclaim all fellowship with such deeds of darkness, and would hold up to the scorn of their fellow men all who are guilty of such *meanness*.

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* "The Merino wether at four years old comes to perfection and makes a splendid mutton, and will invariably command a good price. I am sure that an acre of land will give as many pounds of Merino mutton as from any other breed, and I am sure of decidedly better quality. In proof of this last declaration I can produce the most satisfactory testimonials."—*Theodore N. Davisson, Esq., of Virginia.*

We have been advised of various deceptions practiced by the sheep-dealers of Vermont, by which they have been enabled to palm off, at high prices, very inferior sheep; which farmers are induced to buy for the purpose of *improving* their flocks. It is unfortunate that so many unprincipled men are always ready to take advantage of every attempt of the farmer at improvement, to obtain his money by fraud. If you are not a good judge, ask the advice of some competent friend; or buy only of men of known integrity.

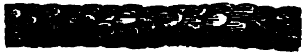
BREEDS OF SHEEP, AND THEIR COMPARATIVE VALUE.

Few subjects are less understood by the generality of farmers than the proper management of sheep and the breeds best adapted for certain purposes. No species of husbandry will pay so well at this time, in most parts of the country, as a proper and careful attention to the rearing and fatting of this valuable animal; and we are glad to perceive an awakening interest exhibited in the subject.

For the manufacture of fine cloth, wool is valued according to its felting properties, and is possessed by some breeds in a higher degree than others. The serrated edge of the wool is supposed to be the chief cause of this difference, and it will therefore be interesting to give the appearance of a single fibre when viewed as an opaque object under a microscope of 300 linear power.

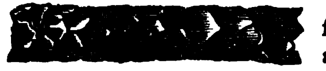
FIBRE OF MERINO WOOL.

The Merino wool was found to have 2400 serrations on an inch, and had the appearance of teeth on a fine set saw, projecting in one direction—from the root upwards.



FIBRE OF SOUTH DOWN WOOL.

The South Down wool is evidently a coarser article, with fewer serrations, and not so acute as the Merino. It is a useful article, but is now but little used in the manufacture of *fine* cloth, on account of its inferior felting properties.



FIBRE OF LEICESTER WOOL.

The far-farmed Leicester, or long wool, is never used for fine cloth; but is very useful for other purposes, on account of its strength and length. It is much thicker, the serrations are not so numerous and are less acute than either of the former. Its diameter is one five-hundredth of an inch in length, and there are but 1860 serrations in an inch.

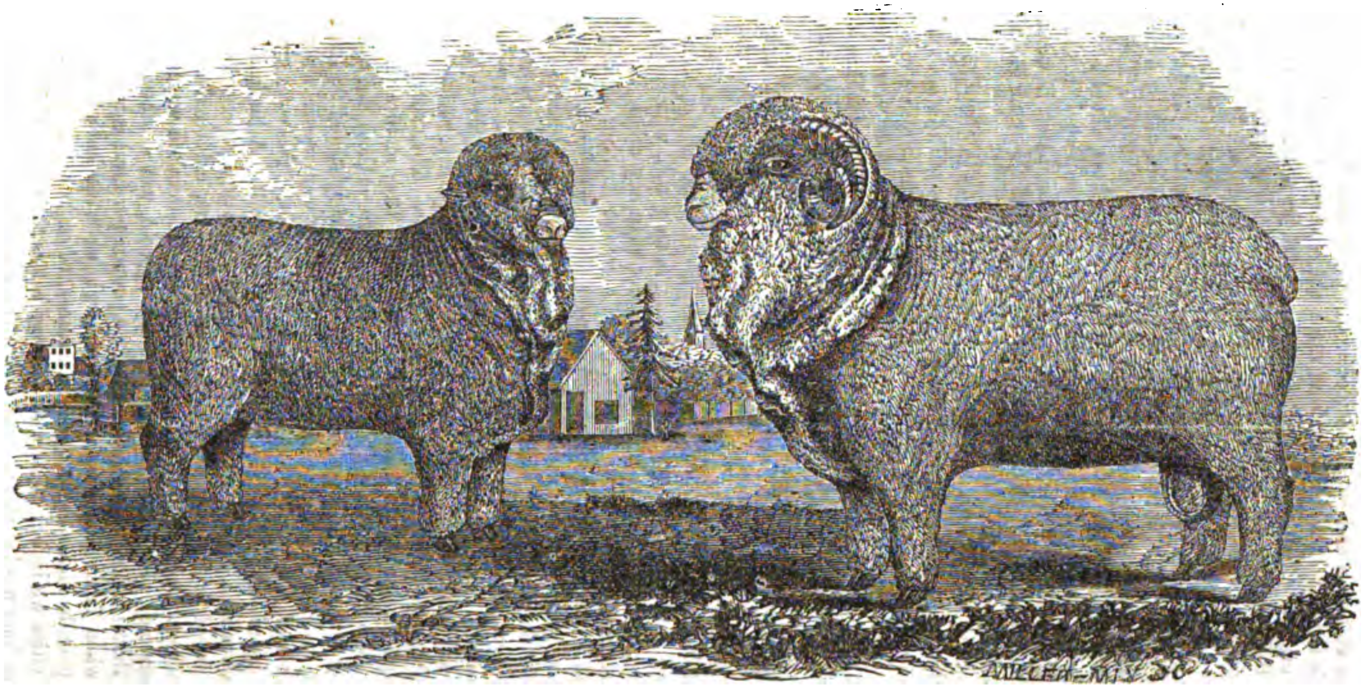
Spain, from an early period, has been justly celebrated for the beauty and fineness of its cloth. From the eighth to the sixteenth century she was about the only manufacturer in Europe. In the thirteenth century there were in Seville 16,000 looms. After the expulsion of the Saracens the woolen manufacture languished. Ferdinand the Fifth banished 100,000 industrious artisans and weavers from the country, because they were Moors, and was honored with the title of Catholic in consequence. His successor followed his example, and expelled between 700,000 and 800,000 Mahomedans in four years. The natural consequence of this was the destruction of the manufacturing interest. The government discovered their mistake too late to avert the injury; yet, knowing the value of their flocks, the farmers sedulously cultivated them, and the sovereigns, except in a few instances, strictly prohibited their exportation. In 1786, the king of France imported 400 ewes and bucks selected from the choicest breeds in Spain, and placed them on his farm at Rambouillet; from these the celebrated breed bearing this name derives its origin. Chancellor Livingston imported, in 1802, two very choice ewes and rams of this breed to his farm on the Hudson. Col. Humphreys, our minister at Spain, also imported a considerable number of superior Merinos. But the largest importation was in 1809. Mr. Jarvis, of Vermont, when U. S. consul at Spain, shipped to this country, as he states, "200 Escurials, afterwards, 1400 Paulars, 1700 Aqueirres, 100 Nigrettis, and about 200 Montarcos. 2700 Montarcos were sent out by a Spaniard and a Portugese, and about 300 Guadaloupes by others; also, 200 to 300 Paulars, by Gen. Downie, to Boston. Of the Montarco flock shipped by others, about 2500 came to Boston, Providence, New York, and other ports. All were imported in the latter part of 1809, '10, and '11, and were the only Leonese Transhumantes, if we include Humphreys' and Livingston's, (which I have no doubt were of the same stock,) that were ever shipped to the United States."

The excellence of the Merino consists in the unexampled fineness and felting property of the wool, and the amount given by each sheep. The closeness of the wool and luxurious yolk furnish these sheep with an impervious coat of mail, which resists rain, snow, or any impurities that would injure the wool; enabling the animal to stand, without much harm, great extremes of temperature; while its voracious appetite makes it apparently satisfied with the coarsest food, and it will stand an occasional scarcity better than any other breed.

Some object to the Merinos for their want of symmetry, their paucity of fat and lambs, and their liability to cutaneous diseases. The latter objection we think unfounded; and when it occurs, is doubtless owing to improper treatment rather than anything peculiar in the functions of the skin. None will question the great value of the Merino in a district where sheep are kept principally for their wool; as they will, with proper attention, yield a larger quantity, which sells for a higher price than any other.

But as the population of the country increases, and a greater amount of food is consumed, mutton will be in request and high prices paid for a superior quality. In the neighborhood of large cities the demand for good mutton has induced many farmers to raise sheep more for the mutton and tallow than the wool; and they find it exceedingly profitable. With such, the South Down, or middle wool, is a deserved favorite. The fine flavor of the mutton is well known, selling in the London market for two cents per pound more than any other kind. The wool is of a medium quality, rather short and thick, selling for about twelve cents per pound less than Merino. The average of a good flock would be about four pounds of washed wool per sheep. They mature much earlier than the Merino. We have known a flock of 125 South Down wethers, fed with American oil-cake, clover hay, and ruta baga, average 168 lbs. live weight, and 96 lbs. carcass when slaughtered, at from ten to twelve months old. They were never shorn. One hundred ewes, unless of very pure blood, will bring 150 lambs. The ewes are usually sold off when five years old, as they then begin to lose their teeth. A buck, if grained, will serve eighty ewes in a season. The accompanying engraving represents two fine specimens of this breed in the possession of Lewis G. Morris, exhibited at the New York State Agricultural Fair in 1851, to which the Society's premium was awarded as best over two years old. They are very hardy, standing cold, wet weather, and heavy soil, much better than the long wooled sheep. Two pounds per head is a good average weekly increase, when fatting for the butcher; though we have known 100 average three and a half pounds increase per week, in summer, when running in good clover. In the vicinity of cities we believe this breed will pay better than any other.

The Leicester, or long wooled sheep, has its admirers, who prefer it to any other breed. Mr. Bakewell, of Dishley, England, by breeding in-and-in, and careful attention to the



MARQUESSE DE ROUGE,
ONE YEAR OLD, SHEARED 10 LBS. 10 OZ.

LOUIS PHILLIPPE,
ONE YEAR OLD, SHEARED 14 LBS. 6 OZ.

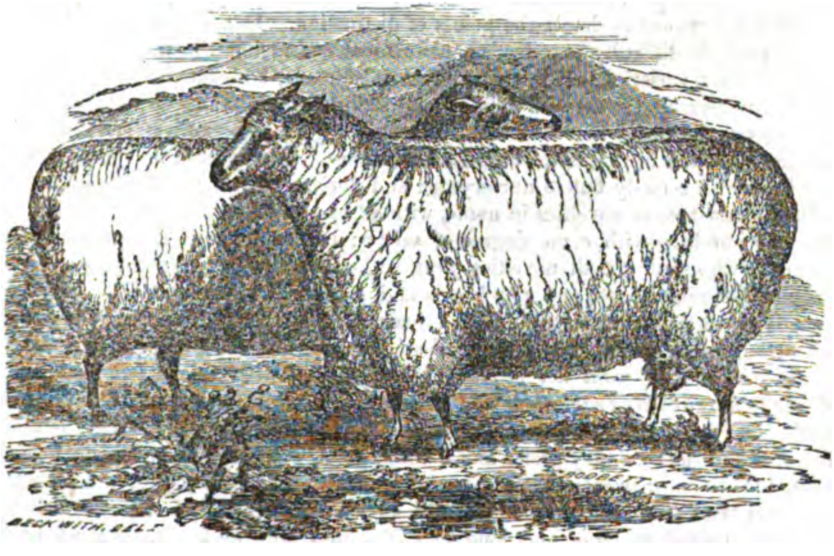
FULL BLOOD MERINO SHEEP.

IMPORTED FROM FRANCE BY J. A. TAINTOR, ESQ., OF HARTFORD, CONN., AND NOW OWNED BY JOHN D. PATTERSON, OF WESTFIELD, CHAUTAUQUE CO., N. Y.

BECKWITH.DEL.

SOUTH DOWN SHEEP.

defects and superior points of the ewes and rams he bred from, raised this breed to great perfection; in fact, may be said to have originated it. For rich lowland pastures, the Leicester has no equal. It matures earlier, fats quicker, and yields more wool for the same amount of food, than any other breed. It is not such a good breeder, is a poor suckler, and the mutton is coarser than the South Down. It will not stand wet, heavy land, and an occasional scarcity of food, so well as the short wools. There are a considerable number of this breed, of more or less purity, scattered throughout the country. We give an excellent representation of the best long wooled buck and ewe over two years old exhibited at the New York State Fair at Rochester in 1851, owned by J. McDonald and Wm. Rathbone.


BECKWITH, DEL.

LEICESTER SHEEP.

Horticultural Department.

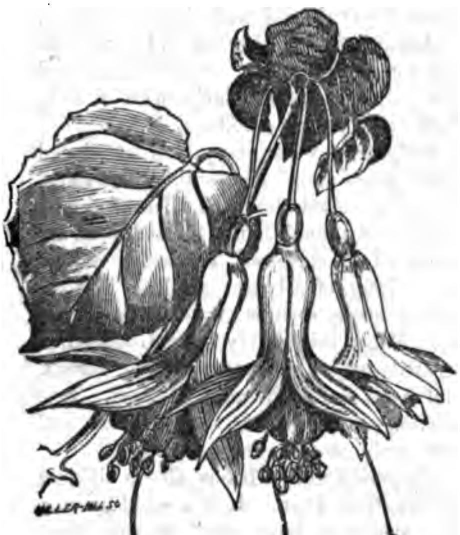
CONDUCTED BY P. BARRY.

THE FUCHSIA.

The Fuchsia is a green-house shrub of small size, seldom exceeding five to six feet in height, and many species not over two or three feet. There is nothing particularly remarkable about the wood or foliage, the chief beauty and character being centered in the flowers. These are of a tubular shape, and have a very graceful pendant habit, combined with great diversity and strong contrasts of the most brilliant and delicate colors. Nearly, if not all, the species yet introduced, are from Mexico and South America. It belongs, in common with the *Clarkias*, *Onœtheras*, *Godetias*, *Zauchsneria*, and several other ornamental genera, to the natural order *Onogroceæ*, (Onograds of Lindley's Veg. Kingdom,) and received its generic name in honor of a German botanist, Leonard Fuchs. It has been cultivated in Europe for thirty years or more, but until ten or twelve years ago did not receive general attention or become really a popular plant. Recently it has become one of the leading objects of pot-culture, and in regard to popularity ranks with the *Rose*, the *Dahlia*, the *Verbena*, &c. It hybridizes with the greatest ease and success; and therefore varieties almost without number, and far surpassing in beauty the original type, have been produced. In Europe, not only in commercial plant establishments, but in private gardens we find whole houses filled with it. Some of the most interesting sights of pot plants we met in our European travels last summer were collections of Fuchsias, in some cases forty or fifty varieties together, all loaded with their graceful, pendant, brilliant blossoms. The prevailing system of flower-gardening, which is the bedding out of green-house summer-flowering plants in masses, has given a great impulse to Fuchsia culture; for in England it is well adapted to this mode of garden embellishment. Like most other plants that hybridize freely, a multitude of varieties are produced that are deficient in character, requiring the critical eye of the experienced grower to detect the points of distinction. Hence, now it has become a matter of no little difficulty to select an assortment embracing the most beautiful and yet really distinct varieties. It is a very great misfortune, both for the professional and amateur cultivator, that some well defined and stringent regulations do not exist for the admission or exclusion of new varieties. The evil begins to be no less seriously felt in the ornamental than in the useful branches of culture. We know of no source to which we can look for a remedy but to nurserymen and florists. If they will unanimously set their faces against mere novelties in name, without any novel or distinct characters, then people may purchase with some degree of safety; but as long as the present foolish rivalry as to who shall get all novelties *first*, without regard to real merits, so long will floriculture be embarrassed, and purchasers and growers be disappointed. Every man who sends an order for a dozen or half a dozen Dahlias, Roses, Fuchsias, Chrysanthemums, or any other genus, should say, "*Send me none but what are really distinct—obviously distinct. I want not merely slight botanical distinctions, but such as will enable me to have striking variations and contrasts in growth, foliage, and habit of plant, or in the size, form, and coloring of the flowers.*" If purchasers will express themselves in this way, and say that they prefer half a dozen good, well marked, and really beautiful varieties, to a dozen or twenty that possess but a striking *uniformity*, they will be getting on the right track; and nurserymen and florists, who are generally but erroneously supposed to be partial to large and long lists of names, will, we know, acknowledge the favor gratefully. Both professional and amateur growers should work together in this matter for the common good; if they do, we venture to predict that no man will have the assurance to ask $5 or $10 for a *new* plant that does not possess a single characteristic to distinguish it from others that can be bought for $5 per dozen.

To return to our subject, the Fuchsia, we will state the points that claim attention in judging of the merits of a variety. As we have already noted, the chief attraction lies in the flowers, and it is to them we must look, in the main, for the merits of the variety. The Fuchsia flower consists, like most other flowers, of a calyx, corolla, stamens, and pistil. These parts in the aggregate make up the flower; and it is their relative size, form, and color, that give those characteristics that constitute the excellencies and beauties of the variety. The calyx, unlike the calyx in most other well known flowers, is colored, and is one of the most striking parts of the flower: a part of it, at the base, is a tube; at the mouth it is divided into four parts called sepals, and these are more or less reflexed, (turned backwards,) as shown in some of the annexed figures, displaying the corolla, which is situated in the throat of the calyx. The more this calyx is reflexed — that is, the more fully the corolla is displayed, the better is the flower, other things being equal. The calyx and corolla are seldom of the same color; and the qualities of the flower depend not only on the depth, richness, and delicacy of the colors, but on the beauty or novelty of the contrast between the calyx and corolla. Then the stamens and pistil, by their length, projecting far beyond the other parts, and by their coloring also, especially of the anthers and stigma, give character to the flower and constitute part of its beauty. Then the flower stalk, or petiole, must be considered: the longer it is, the more pendulous the flowers are, and the more graceful the habit; the stronger it is, the better the flowers stand out from the foliage. The requisites of a plant are — distinct and fine foliage; free, robust growth; and profuseness of bloom.

These are the main points to look to in selecting a Fuchsia or a collection. People are too apt to be struck with one feature, and overlook the rest. For instance, if they find a plant with a flower on it, and it happens to please them, they seldom stop to inquire into other important qualities that should never be overlooked. Now we shall describe briefly a few select varieties selected from fifty which we have under cultivation. The first on the list is the



PEARL OF ENGLAND.

Pearl of England.—This, to our fancy, is the finest yet introduced; certainly the finest of all those hybrids with light colored tubes. The annexed figure shows this in the natural size. The calyx is of a pale flesh color, or nearly white, well reflexed, showing a a fine, full, bright scarlet corolla. It grows freely and blooms most profusely. New.

Eliz Mielliez.—Nearly as good as the preceding, and somewhat similar. The calyx is of a rosy blush towards the base, nearly white at the mouth, well reflexed, showing a deep rosy pink corolla. Grows well and blooms freely.

Fair Rosamond.—A long, elegant flower, well named for its grace and delicacy. Calyx long, almost pure white, not much reflexed, but showing a fine, rich, scarlet corolla. Plant vigorous and blooms freely.

Snow Drop.—Flower rather short; calyx pure white; corolla light crimson. Plant grows freely, but requires pinching back to keep it compact and well branched.

Magnificent.—A splendid large flower, rosy calyx pretty well reflexed, showing a large, rich, rosy salmon corolla.—Habit spreading and vigorous, and a free bloomer.

Nonpareil.—A large, showy flower; calyx rich deep crimson, well reflexed, showing a fine rich rosy purple corolla. Good habit.

Grand Master.—Very distinct. Calyx short, of a bright red. Corolla large and conspicuous, of a deep purple. Branches dark red, slender, and drooping. Blooms profusely.

President.—Very distinct. Calyx pale rose; sepals very narrow and well reflexed, showing an unusually large violet red corolla. Foliage distinct, large, dusty green, heart shaped, and sharply toothed.

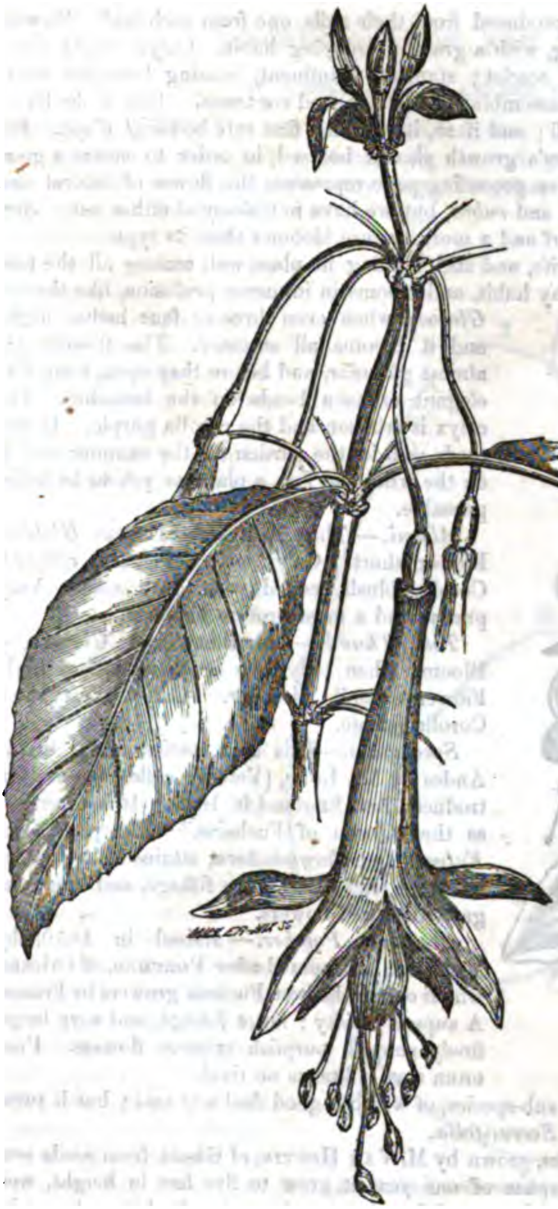
Exoniensis.—Rather an old sort now, but good and distinct. Scarlet calyx well reflexed, contrasting finely with a rich, dark violet purple corolla.

Fulgens.—A distinct species, introduced a few years ago. It has tuberous roots, strong succulent shoots, and leaves almost as large as a man's hand. The flowers are produced in clusters. The calyx is two inches long, of a bright scarlet. The corolla, scarcely seen, is of a deep fiery scarlet. When this variety was introduced, it created quite a sensation among florists, and is yet one of the most admired. It is a strong, rapid grower, rather coarse, and attains the size of a large shrub.

Corymbiflora.—This is also a distinct species, from Peru. It is a rapid grower, and attains a large size. Foliage very large, of a pale green, soft and downy. Flowers in large clusters, very long—two inches or over—and of a bright crimson. A showy and an elegant plant, but somewhat coarse, and appearing to good advantage only when it has attained large size and full blooming condition. There are two new ones that promise well—hybrids between the two last named. One is called ***Fulgens corymbiflora***; and the other, ***Corymbiflora alba***.

MAGNIFICENT.

Serratifolia.—This is also a species, or a sub-species, quite distinct in appearance—



SERRATIFOLIA.

newly introduced, from Peru. We have bloomed it the past autumn, and are delighted with it. It does not bloom like the others, in the summer, and we began to think badly of it; but in October the young plants of last spring commenced blooming, and continued through November and even December—a season when they were highly desirable. This late blooming of the young plants may be a useful trait. The habit of the plant is low, stout, bushy. The leaves are very dark, opposite in fours (verticillate) on the branches, and the flowers are produced from their axils, one from each leaf. Flowers about one and a half inches long, with a graceful drooping habit. Calyx bright rose; points of sepals green; corolla scarlet; stamens prominent, bearing beautiful white anthers: making in all a fine assemblage of colors and contrasts. This looks like a plant that will stand the sun well; and if so, it will be a first rate bedding plant. For this purpose plants of one season's growth should be used, in order to ensure a good autumn bloom. The engraving on preceding page represents this flower of natural size. There is also a *Serratifolia alba* and *rubra*, but we have not bloomed either yet. *Serratifolia multiflora* is more dwarf and a more profuse bloomer than its type.

Globosa major.—An old favorite, and still holding its place well among all the new and fine sorts. It is of low, bushy habit, and blooms in immense profusion, like the old *Globosa*, when even three or four inches high; and it blooms all summer. The flowers are almost globular, and before they open, hang like elegant crimson beads on the branches. The calyx is crimson and the corolla purple. It succeeds well in the garden in the summer, and is on the whole so fine a plant as yet to be indispensable.

GLOBOSA.

Alboni.—This is a hybrid from *Globosa*. Flower short. Calyx pale rose, well reflexed. Corolla blush, edged with deep rose. Very pretty, and a most profuse bloomer.

Tom Thumb.—Another from *Globosa.*—Blooms when only two or three inches high. Flowers small, globular. Calyx cherry red. Corolla purple.

Spectabilis.—This is a *species*, found in the Andes by Mr. LOBB, (Veitch's collector,) and introduced into England in 1848. It is described as the "Queen of Fuchsias." The plant, like *Fulgens* and *Corymbiflora*, attains a large size; has large, rich, deep green foliage, and long, elegant, deep red flowers.

President Porcher.—Raised in 1850, by MIELLIEZ, and nomed after PORCHER, of Orleans, who is one of the best Fuchsia growers in France. A superb variety; large foliage, and very large, finely shaped, purplish crimson flowers. PORCHER says it knows no rival.

Venusta is a *species* also, or a sub-species, of which a good deal was said; but it turns out to be similar and inferior to *Serratifolia*.

Syringaeflora is another *species*, grown by M. VAN HOUTTE, of Ghent, from seeds sent him from Guatimala. In the space of one year it grew to five feet in height, well branched, and produced immense clusters of flowers after the style of a Lilac; hence its name. The beautiful engraving in the "Flore des Serres" is really tempting, but the reports of cultivators are not very favorable.

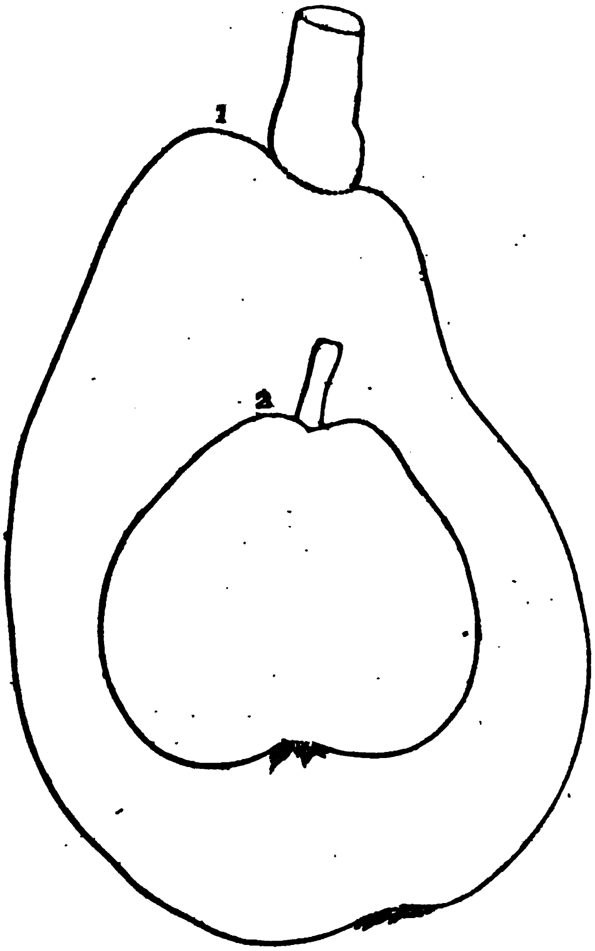
We must add, before leaving this part of the subject, that we might name a dozen more fine sorts; but our list is already long, and we have given such as *we know* to be really distinct and desirable. We intended to give some hints on the propagation and culture of the Fuchsia, but we have already extended this article beyond the allotted bounds, and must defer the remainder till next month.

DESCRIPTIONS OF NEW PEARS.

BY B. DESPORTEZ, OF ANGERS, FRANCE.

Bonne des Zees, (Fig. 1.)—*Fruit*—large, about four inches long and two inches and three quarters in diameter; pyriform, irregular. *Surface*—uneven, one side concave and the other convex. *Stalk*—very large, irregular, larger at the base, about two-thirds of an inch long, inserted on the surface. *Calyx*—small, set on the surface, segments open. *Skin*—thin. *Color*—gray, especially toward the eye and stem; greenish yellow in the middle. *Flesh*—white, very fine, melting, tender, buttery, juicy, and sugary. Ripens end of September and beginning of October.

This fine pear deserves, by its beauty and excellence, an extensive trial. It was put in the trade by Mr. DUPUY, and was originated from seed at Loches, France. The tree is a vigorous grower, naturally pyramidal in habit of growth, and a good bearer.



Beurre Derouineau, (Fig. 2.)—Some years ago, Mr. DEROUINEAU, of Angers, having sown some seeds from the *Glout Morceau*, obtained young trees, one of which came into bearing in 1840. Mr. DEROUINEAU presented the first fruits to the committee of horticulture, who gave to it the name of the originator.

This fruit is small, as will be seen by the annexed outline; obovate or obtuse turbinate, roundish toward the eye, very broad, narrowing one-third of its height towards the stem, where it terminates in a small basin, in which the stalk is inserted. *Stalk*—about one-third of an inch long, slender, and upright. *Eye*—large, broad, closed, set in a broad, deep, and somewhat folded cavity. *Color*—deep gray, spotted with russety gray dots everywhere, except around the basin of the eye. *Flesh*—white, fine, melting, buttery, juice abundant, sugary, and highly perfumed. It is one of the most delicious new pears obtained in a long time. We compare it, for its high flavor, to the American *Seckel*, which it also resembles in form; and hence we call it the *French* Seckel. It differs from it only in being darker colored and ripening later—about the last of Oct.

This kind produces annually an abundant crop. The fruits are borne in clusters of four or five together. The tree is one of the most vigorous growers in the nursery, of pyramidal form, nevertheless the branches spread at right angles with the stem. The wood is a reddish brown, covered with large light gray dots, short jointed; buds short and point outward; the leaf stalks are of a rose color at the base. It is yet but very little known; but when it becomes more so, it must occupy a place in every well assorted fruit garden.

◆

THE BRADSHAW PLUM.—I noticed your description of the *Bradshaw* plum, in the October number of the Genesee Farmer, with some interest, because it is a particular favorite of mine. Your description is correct as far as it goes, but you failed to notice a peculiar feature in the insertion of the stem on a protuberance resembling a small button lying flat on the end of the plum. This feature belongs to nearly all the large specimens. I have trees of this variety which have borne for several years, and the fruit has been uniformly fair and never in the least been affected by cracking or rotting on the tree, while that of every other variety in my collection has been more or less affected in that way. I suppose you inadvertently substituted the name of Judge BURROUGHS in place of mine, and South Bend in place of Plymouth. If so, be so good as to correct. GROVE POMEROY.—*Plymouth, Ind.*

We are much obliged to Judge POMEROY for calling our attention to the error we committed in referring to Judge BURROUGHS, as well as for the valuable information he gives us from his experience in regard to this excellent plum.

◆

THE BAILEY SPICE APPLE.—JOHN W. BAILEY, Esq., of Plattsburgh, N. Y., sends us the following note in regard to our notice of his apples. It is possible we are mistaken in regard to the identity of the *Bailey Spice* and *Pomme Royal*—another season will satisfy us.

In your notice of the apples I sent you, you say that the *Bailey Spice* is so much like the *Pomme Royal* or *Dyer* as to leave little doubt, in your mind, of their identity. The *Bailey Spice* originated in my orchard; the tree is more than fifty years old. I am quite confidant that scions of this variety have never been given out except by myself, and that within the last five or six years under the true name, and I therefore conclude that there is *no doubt of its being distinct from every other variety*. I have no doubt when you see fair specimens of the *Walworth*, you will form a higher opinion of it. JOHN W. BAILEY.—*Plattsburgh, N. Y.*

◆

J. R. COMSTOCK, Esq., of Mabbettsville, Duchess county, New York, writes us as follows:

The best November pear we have had this year is *Epine Dumas** of Mantel city, of New York. *Form*—long, varying from oval to obtuse pyriform. *Color*—greenish yellow. Lasts the whole month—has been "best" four years in succession on both pear and quince stocks. *Josephine de Malines* bore this season—is ripe now—would be very fine indeed if not a little too astringent. *Winter Nelis* is an October pear three years in four. The great and never-failing winter pear here is the *Easter Beurre* on sucker pear stocks, that fill the ground as full of fibrous roots as the quince. We grow it on a warm gravelly loam, on the south side of a hill, near the base.

* *Duc de Bordeaux.* It proves with us a remarkably prolific and good pear.—ED.

◆

S. W. COLE, Esq., late editor of the New England Farmer, author of "Cole's Fruit Book," died at his residence, near Boston, Mass., on the 3d of January. He was long connected with the agricultural press, and his death will be widely regretted. He was an industrious, observing man.

Work for the Month.—Very little can be done in the garden or orchard during the month of February. *Old apple trees* that have been neglected until the heads are become dense and twiggy, may be thinned out at any time; *scions* may be cut; *poles* for peas and beans, and supports for climbing plants, rustic baskets, flower stands, or other ornaments, may be constructed; *manures and composts* collected, turned, mixed, and prepared for application; *implements* may be put in order; and various arrangements made that will facilitate operations in the spring. Those who intend to use *hot-beds* may be getting them in readiness for the middle of March. The *fruit room* will demand attention; and it must be remembered that the conditions most favorable to preservation are dryness, coolness, and uniformity. Warm air should never be admitted among fruits, as it creates moisture by condensation, and this promotes decay. All unsound specimens should be removed at once, and nothing like decaying vegetables, or anything that emits an offensive odor, be for a moment permitted near the fruits.

◆

A National Park.—Our government at Washington has really taken one step towards the formation and improvement of public grounds. 150 acres of land within the city of Washington is to be converted into a magnificent park, embracing four or five miles of carriage drive, foot walks, ponds, fountains, statues, &c., and a complete collection of the trees indigenous to North America. The plans have been given by A. J. Downing, Esq., and the work is to be executed under his superintendence. It is supposed that three or four years will be required for its completion.

The question of a great park in the city of New York is also *agitated*, but the New Yorkers hardly know what a park means. Philadelphia is also moving in the same direction. The times are brightening.

◆

Fruits from France.—Mr. Andre Le Roy, of Angers, France, sent to the Massachusetts Horticultural Society a case of fruits for exhibition, comprising 116 varieties of pears, 36 of apples, 12 of crabs, walnuts, chestnuts, &c.; and we learn from Hovey's Magazine, that only about 30 varieties of the pears, and the same number of the apples, arrived in good order, owing to detention in England. Mr. Le Roy has, in a recent communication to us, expressed his intention of sending a collection to our next State Fair. So much for steam communication. Europe and America will soon be making exchanges of fruits on an extensive scale.

◆

The Season.—The winter here set in unusually early, and up to this time (Jan. 10) has been marked by extreme severity—a continued succession of hard frosts and heavy falls of rain and snow. On the night of the 2d of January the mercury fell 10 deg. below zero—a degree of cold seldom experienced here. No serious injury is yet done to fruit trees or the wheat crop, and now we have a fine warm coat of snow eighteen inches deep. We trust the close of winter will be more temperate than the beginning.

◆

The North American Sylva.—A new edition of this magnificent work of Michaux, on the Forest Trees of North America, with Nuttal's continuation, has just been issued by Robt. P. Smith, of Philadelphia; the whole forming six volumes royal octavo, with 278 plates. This will be a real treasure to every man who can afford to place it in his library. Price, $45 dollars with colored plates; $31 uncolored.

English Agricultural News.

Reaping Machines in England.—We were not surprised at the success of McCormick's Reaping Machine in England, but we were certainly surprised that it should gain such a decided advantage over Hussey's as for a time to throw it entirely in the shade. We were satisfied either that Hussey's Machine was not in proper order, or was managed by some one ignorant of its use. The latter appears to have been the case, according to the London Farmer's Magazine, from which we quote the following:

"A porter from the exhibition, [possibly a *cockney*,] who had never seen wheat in his life, was on the first trial sent to work Hussey's Machine, who did not know how to set it; the consequence was, it left a high stubble and did not work well. McCormick's had a better fate, and won the 'Great Medal.' Hence he challenged the world, at the Cleveland Agricultural Society, and Hussey or his agents accepted the challenge. Twelve practical farmers were appointed to decide on the merits of each. The day was fixed, and though it was most unpropitious, yet a vast concourse of people assembled; and though it rained 'cats and dogs,' with a strong wind, yet the small, snug, simple, Hussey's Machine cut down its breadth of corn closely, evenly, and well. It was a triumph! Two horses walked gallantly away with the machine, nor did it seem to distress them, while little effort seemed to be necessary to receive the corn from the well arranged platform on which the lancets, for such they are, left it after cutting. There were no ugly and ponderous flappers—no array of useless work, but a condensed, simple arrangement of parts necessary to effect its purpose. McCormick's Machine came next to the trial; but it would not work at all. It operated more like a roller; it refused to cut the corn; and the trial was abandoned."

The jury, on account of the unfavorable state of the weather, separated without making any award. Another day was fixed, and the machines tried on wheat and barley; when the jury unanimously decided in favor of Hussey's Machine.

"By a vote of eleven to one, Hussey's Machine caused the least waste, did the most work, leaves the cut corn in the best order for gathering and binding; and unanimously, that Hussey's is best adapted for ridge and furrow, and at first cost is less price, and least liable to get out of order."

◆

American Plows in England.—At the Storrington Farmers' Monthly Meeting, the subject for discussion was "Agricultural Implements, and Horses." We give a few extracts:

"Mr. Hardwick said: 'The first and most important implement on a farm is the plow. It is made on various principles adapted to the different soils and purposes for which it is required. Hence it is impossible to point to any one particular plow, and say, 'This is best,' unless the description of soil and the precise operation it is to perform be at the same time pointed out.

"'The roller is also an implement indispensable to the agriculturist. A wooden one—though in my opinion not so good as an iron one of larger circumference, and in two parts—is most extensively used, the first cost being small.

"'The drill is an implement extensively used in depositing the various seeds. Many think there is great advantage in drilling over the broadcast system. My own opinion is, that the difference in the two systems, if carefully noticed with regard to the weight of the crop, would be found to be very trifling. I am, nevertheless, of opinion that the drill in many cases is a very useful implement.'

"Mr. Lear said: 'I will just draw your attention to the American plows, which perhaps some of you have seen at the exhibition. That they have been pretty well ridiculed I know; but that does not detract from their value; and I am inclined to think they are well adapted for the work they are intended for. The turn-furrow is exceedingly well shaped, and in fact is a business-looking thing altogether.'

"Mr. W. Batticock said if any of them had an inclination to inspect one of these plows, it might be seen at Major Sandham's farm, and also some work it had performed. He [Mr. B.] was perfectly satisfied of its usefulness on light soils, for preparing the barley or turnep season. It required but one horse to draw it. [Hear, hear. 'That's the sort we want.'] He was aware this could not be done on heavy, stubborn land; but for the purposes he had mentioned, it appeared to him a very useful implement."

◆

From a private correspondent we learn that farmers generally are putting forth all their energies to meet the low price of their products caused by the removal of protective duties. They are growing more green crops and keeping a larger stock, and are thus able to make ends meet. The contemplated alteration in the franchise will strengthen the free trade, manufacturing, liberal party, and so relatively weaken the landed interest.

Editor's Table.

Our friends who are laboring to increase our circulation, in all parts of the country, are placing us under great obligation, which we shall endeavor to repay in part by sparing neither money nor labor to make our journal meet their most sanguine expectations. Additions can be made to clubs at any time, at the lowest club price. Those who have forwarded clubs of five can increase to eight by forwarding $1. The Post Office law does not allow us to send receipts; and those who receive the paper, unless we write them on the subject, may consider it as such.

◆

Answers to Inquiries.—We endeavor to answer inquiries so as to be understood by all. To do this we have to occupy considerable space. Those who have made inquiries and received no answers, must exercise patience, as all shall receive attention soon. During the winter season farmers have leisure to write, and we are pleased that they embrace the opportunity. We often, at this season, receive enough matter in a day to fill a number of our journal. All shall have a hearing in due time.

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Ladies' Department.—Although we have given no pages under this heading, Mr. Barry has occupied the room with descriptions of flowers, &c., that we know will be acceptable to our female readers. All who have applied for seed shall be furnished in season for spring planting. We intend to commence descriptions of the best annuals, in our next.

◆

Poultry Profits.—Edw. Dimmick, of Pleasant Mount, Pa., gives his poultry account, for the past year, as follows:

Kept fifteen hens and one cock, from which we received

100 dozen eggs, at 18 cents,........	$18 00	
90 chickens, at 13 cents,...........	11 70	—24 70
Cost of feed,......................		10 00
Profit,...........................		$14 70

◆

Large Hog.—D. Edwards, of Little Genesee, N. Y., writes, Nov. 11: "We yesterday killed a hog twenty-seven months old, connected with the Leicester family, that weighed 800 lbs. He has had none but common keeping until this summer. We have given him his feed in a sour state, and fed but three times a day."

We suppose our western friends can beat this, but as we don't pretend to compete with them in the pork line, they must let us boast a little among ourselves.

Planting Potatoes in the Fall.—C. D. Hart, of McLean, N. Y., suggests the idea of planting potatoes in the fall. He states that O. Wing, of Cortland county, has pursued this course, and the yield is much better than with those planted in the spring.

◆

Trying Lard.—"A Farmer's Wife," of Mount Morris, N. Y., wishes us to state, for the benefit of other farmers' wives, that a table-spoonful of salæratus to a pailful of lard, put in soon after it begins to heat, much improves the quality, rendering it a pure white. A little more attention than usual is necessary to prevent its burning.

◆

Inquiries and Answers.

Coal Ashes and Saw-dust as Manure.—A gentleman of Henry county, Ky., wishes to know the value of saw-dust as manure, and the best means of hastening its decomposition; and E. Appleton, of Pittsburgh, and others, inquire as to the value of coal ashes.

Saw-dust contains from four to ten pounds of nitrogen per ton. This would indicate that its manuring value was a little higher than wheat straw, but it is much more difficult to decompose and render fit for assimilation by the plant. If plowed in in its natural state, it would do good, but not to that extent the above account of its composition would lead us to think, owing to its insolubility and difficulty of decomposition. A pound of nitrogen can not be bought in guano or sulphate of ammonia for less than twelve cents per pound; so that saw-dust, compared with these manures, would be worth on an average eighty-four cents per ton. We think it could be profitably used as an absorbent of liquid manure, by being placed at the bottom of the barn-yard, or in some place where this liquid runs; it would thus imbibe the water, and a decomposition would take place, and at the end of a year or so you would have a most valuable manure, inasmuch as this liquid which in so many instances is allowed to run away and be lost, is by far the most valuable portion of the manure, containing all of the alkaline phosphates and a greater part of the ammonia; these would unite with the saw-dust and not only be exceedingly valuable themselves, but convert the saw-dust itself into a good manure. We hope our friend will try one or both of these plans, and give us the results. Chemistry, to be of much value to agriculture, must have the aid of the practical farmer, who can carry out the indications of science and disprove or establish them by practice.

Coal ashes in England are quite plentiful, coal constituting the whole of their fuel. They are mostly preserved with care and used with guano and sulphate of lime, serving to increase the bulk and enabling the *drill* to distribute these concentrated manures evenly over the soil. They are also used as a manure for meadow grass and clover with beneficial effect. They are also very useful to mix with nightsoil, absorbing the fluids and rendering its removal and application to the soil less difficult and disagreeable. On the whole, we are inclined to think their value is to be attributed to their mechanical effects on the soil, rendering it more porous and absorbent, rather than to any chemical ingredients they may contain. It is often used by market-gardeners in forming beds for early seeds, and is particularly commended as a manure for radishes.

◆

Method of Curing Hams.—In answer to inquiries on this subject, we give the awards of the Maryland State Agricultural Society, at its last exhibition. The method of curing is wisely given in each case. The hams of Virginia and Maryland have long been celebrated.

T. E. Hamilton's Recipe.—*First Premium.*—To every 100 lbs. pork take 8 lbs. of G. A. salt, 2 oz. saltpetre, 2 lbs. brown sugar, 1½ oz. of potash, and four gallons of water. Mix the above, and pour the brine over the meat, after it has lain in the tub for some two days. Let the hams remain six weeks in brine, and then dried several days before smoking. I have generally had the meat rubbed with fine salt when it is packed down. The meat should be perfectly cool before packing.

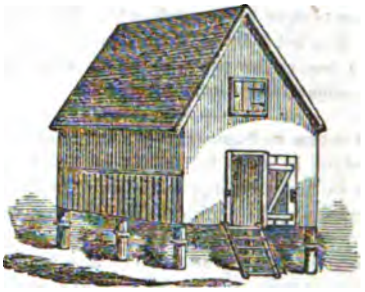
J. Green's Recipe.—*Second Premium.*—To 1,000 lbs. of pork, take half a bushel and half a peck of salt, 3 lbs. saltpetre, 3 lbs. sugar, and two quarts of molasses. Mix—rub the bacon with it well; keep on for three weeks in all; at the end of nine days take out the hams, and put those which are at the top at the bottom.

R. Brooks, Jr's Recipe.—*Third Premium.*—One bushel of fine salt, half bushel ground alum salt, one and a half pound to a thousand pounds of pork, left to lie in pickle four weeks, hung up and smoked with hickory wood until the rind becomes a dark brown.

C. D. Slingluff's Recipe.—*Fourth Premium.*—To 100 lbs. green hams, take 8 lbs. G. A. salt, 2 lbs. brown sugar or molasses equivalent, 2 oz. pearl ashes, 4 gallons water; dissolve well, skimming off the scum arising on the surface. Pack the hams compactly in a tight vessel or cask, rubbing the fleshy part with fine salt. In a day or two pour the above pickle over the meat, taking care to keep it covered with pickle. In four to six weeks, according to the size and weight of the hams, (that is to say the longer period for heavy hams) hang up to smoke, hock up, smoking with green hickory wood. I have put up hams for the last 12 or 15 years by the above recipe with uniform success, equal at all times to the sample now presented.

◆

Rat-Proof Granary.—Yellow Bug.—The best rat-proof granary within my observation is set on posts smoothly turned, and sheathed with tin about a foot in width from the upper end. The posts stand three feet out of the ground, and the steps are hung on hinges or pivots, to be raised and turned in when the granary is closed. No rat ever dined in that crib.



RAT-PROOF GRANARY.

The lower floor is used for corn, (both sides being neatly slatted,) and the second (reached from the first by stairs swung on pivots as before) for the smaller grains.

Although out of season, it may prove of advantage to some of your subscribers another year to know how to prevent the ravages of the "yellow or striped bug." Tansy failed entirely, so far as my experience was concerned. Hen manure dissolved in water and sprinkled on the vines, succeeded tolerably well, but required constant watching and repetition. But the best method for a limited number of plants, as I think, is to set over the hill as soon as they appear, open boxes eighteen inches square and six to eight inches deep, gathering the earth about the bottom to prevent their crawling under. In the same garden, during the last summer, those vines which were protected by tansy were covered with bugs, while those inclosed in boxes, only a few feet distant, escaped unharmed. A dozen or two of such boxes can be made in a few hours on some winter's day, out of old fence boards, if need be, and had in readiness for the summer's use.

◆

Rat-Proof Granary.—I noticed in one of your numbers an inquiry for a rat-proof granary. In answer to that, I will only give the form of mine, which so far has had the desired effect. I make it as tight all round as convenient with common lumber, except a place in the center, overhead, for the rats to go in if they would; but seeing no way to get back, they do not like to jump through the hole. This I think prevents them from gnawing at any other place. The hole must be in the ceiling, under the joist, and a floor over it, so the rats can have free access to the hole. P. S.—*Rollin, Mich.*

Gas Lime.—In your January number is an inquiry as to the value of gas lime in the destruction of the larvæ of the May bug, &c.; and having used a little, as also the tar, some eight years since, I give you the result of my experience. My garden, which was a light sandy loam, was much infested with the centipede and the larvæ of what is called in some parts of England the Fern Shaw, a small brown beetle rather less than the Rose bug, and which in its perfect state is exceedingly destructive to apples, pears, peas, &c., &c. In October I spread a load of lime fresh from the gas works on about three rods, and dug it in immediately, thus absorbing the ammonia which was passing off freely. In the spring following I planted with early potatoes, manuring as usual with stable manure; and the crop was certainly more free from the ravages of the centipede than any I had before raised, and but few of the insects were found; but as to the larvæ of the beetle, I did not perceive any diminution in their numbers, nor was there any marked increase in the crop.

To one gallon of the tar I added one pound of sal soda and ten gallons of boiling water. This mixture I applied to a part of a row of peas, and to the remainder pure water. The part to which the mixture was applied made a much larger growth of haulm without a corresponding increase of pods. This increase, I have no doubt, was due more to the soda than the tar. I also applied the tar undiluted to the stems of some old gooseberry trees that had been infested very much with the caterpillar the previous summer, and the application proved fatal to the trees. L.—*Brooklyn, N. Y.*

◆

Application of Manure.—I wish to learn through your paper, as I have had access to it but a few months, something of the use of manure—the most economical way of applying it. I mean manure that is made through the summer season, from the droppings of cows, &c. I gather up the droppings and mix well with dirt through the summer; usually in the fall I have carted it out, and sometimes spread it on green sward and plowed it in, when I intended to plant even the coming season; and sometimes I have, after digging my potatoes, spread it on and plowed it in, where I intended to seed down to grass the coming season; and my expectations have not been fully realized. I wish to know your opinion in spreading it on as a top-dressing for grass, and at what time it should be used as a top-dressing. I used it in this manner for the purpose of getting it out of the way, and so that it might not dry up and thereby loose its strength. I also wish to know the best way of using soap boilers' ashes, whether to sow on grass ground, and at what season, in the fall or spring, or to put them on the land where we sow down to grass.

A Friend to Agricultural Knowledge.

1st. Be sure to save all the liquid as well as solid part of the manure voided during both summer and winter. This can be done by bedding cows, and other domestic animals, on any absorbent substance, like dry swamp muck, loam, straw, forest leaves, and the like.

2d. On open, porous soils, and such as are inclined to surface wash, (hill sides,) it is best to apply manure in the spring before grass starts, or at that time; but on retentive soils, to apply manure in the fall and turn it under for a spring crop, is sound policy. If applied to a meadow, or pasture, we should harrow the surface, partly to incorporate the manure or ashes with the soil, and partly to give the grass plants a new start by a kind of root pruning. Thus treated, land will retain all, or nearly all, of the fertilizing elements applied to it.

3d. Soap-boilers' ashes are greatly improved by mixing lime with them, say at the rate of one bushel of recently slaked lime to three or four of ashes. On soils that lack lime, equal parts of the two would be better. If we had the time at our disposal, we should apply the food of all plants to the earth where they are to grow only a few days before said plants were expected to begin to consume it. But circumstances vary all general rules indefinitely.

◆

HORTICULTURAL.

Two apples have been received from Mr. Jos. Patterson, which Mr. P. states in a note originated in the orchard of his father, Amos Patterson, in the town of Union, Broome county, N. Y., and called in the neighborhood *Patterson Sweet*—supposed by Mr. B. to be the *Bailey Sweet*. This apple looks and tastes so much like the *Bailey Sweet*, that we dare not say it is not it. The specimens were too ripe to determine correctly.

(C. D. H., McLean, N. Y.) A correspondent has taken up the subject of the Grape Vine, and will probably give you the desired information. The *Fruit Garden* is $1.25—postage 20 cts., prepaid.

(B. J., Wilkins, Allegany county, Pennsylvania.) The tree of which you enclose a piece, is the *Taxus canadensis*, (American Yew.) It does not flourish in the sun. The *Cupressus thuyoides*, or white cedar, is different from the American arbor vitæ, although the latter is generally called white cedar in this part of the country. It is a lofty tree, with somewhat drooping branches, and foliage, in appearance, between the arbor vitæ and red cedar. It abounds in swampy grounds in New Jersey, and southward. We are much obliged for your drawings.

Apples.—(P. J. W., Fort Plain, N. Y.) No. 1 is *Rhode Island Greening*. No. 2, *Westfield Seek-no-further*. No. 3, don't know. The seeds will be sent out in time.

Buckthorn Hedge.—(E. C. S., Wauwatosa, Wis.) Prepare the ground as you would for wheat or corn, and get two year old plants at about $10 per 1000. Plant in a single row at six inches, or in a double row at twelve inches apart; about 1800 for 100 rods.

(J. G. C. L.) Leap year, as such, has nothing to do with the success of grafts. A silly old whim, sure enough!

(J. G., Mohawk, C. W.) We do not know where seeds of ornamental trees or shrubs can be found now. You might secure them by applying to the nurserymen or seedsmen in the summer.

(J. C., Creages, Md.) Get your trees early in the spring. Send your order to the nurserymen early.

(P. M., Sylvania, Pa.) We do not know where cherry and quince seeds can be obtained now. Such things should be ordered in season—cherry in June and quince in October. Seeds are generally saved but to order.

(J. P. H., Charlotte, Mich.) The insect you describe was the *rose bug* itself, and your mode of destruction was as good as any we know. They are destructive, voracious, and almost unconquerable.

Hot-Beds.—(J. P., Pomfret.) A hot-bed frame is simply four boards, or four pieces of one and a half or two inch plank, made into two sides and two ends, one side being twice as deep as the other, the ends sloping from back to front at such an angle as will throw off the rain and admit sufficient light. The ends and sides may be nailed together, or attached by hooks and staples; the latter is more convenient for taking them apart to lay away. Small rafters of two inch stuff, four inches wide, are placed across and let into the sides to support the sashes. The sashes are made of any desired width—three to four feet—and as long as the hot-bed is wide. It is made as a window sash, but without cross bars, except one in the middle to keep it firm. The lights are overlapped an eighth to a quarter of an inch. Use good, strong, clear glass, free from specks. The number of frames you want will depend upon the extent of your proposed operations. This you must determine. In forcing largely, it is well to have some pretty large frames. These you must get ready in season, and also plenty of stable manure. You can begin to force about the first to middle of March. We will endeavor to give you some further information, but would advise you to get Bridgeman's or Buist's treatise on Kitchen Gardening, as we can not go into all necessary detail short of writing a book. Get our volume for 1849.

(R. P. R., Chittenango.) We will endeavor to give you some facts respecting circulation of sap in plants. The egg plant is grown like a tomato. The plants should be started in a hot-bed before putting out in the garden. The fruit is cut in thin slices and fried in batter usually. There is no possible way of producing several sorts in one, but a number of varieties may be obtained on one tree by grafting or budding.

(J. D., Corydon, Ind.) Seeds of the arbor vitæ can not be obtained here now; the other seeds will be sent in season.

"Twenty best Pears for General Cultivation."—(D. E. G., Haviland Hollow.) We can heartily recommend you the following: *Summer*—Madelaine, Bloodgood, Dearborn's Seedling, Bartlett, Osband's Summer, Tyson. *Autumn*—Beurre Diel, Beurre Bosc, Belle Lucrative, Louise Bonne de Jersey, Duchesse d' Angouleme, Doyenne Boussock, White Doyenne, Swan's Orange, Seckel. *Winter*—Vicar of Winkfield, Winter Nelis, Lawrence, Princess St. Germain, Pound. If six varieties of summer pears are too many, strike out some and add Flemish Beauty and Van Mons Leon le Clerc.

(J. C., Indian Spring, Pa.) We can not, without more information, venture a decided opinion in regard to the disease that affects your apples. It may be the soil is too cold, wet, or sour—may need draining, deep plowing, and manuring. It must be owing to the absence of necessary ingredients of food in the soil, or the presence of some injurious one. Lime can not cause it, for the apple is always finest on limed and limestone soils.

Osage Orange.—(J. D. A., The Square, N. Y.) You can get the seed through any of our seed stores, at about one dollar per quart. Soak it 24 hours in warm water before sowing. Sow in drills in light soil, and cover an inch deep. The plants are fit for a hedge row at one year old; and if well planted and taken care of, will make a good hedge in four years. It is a little tender. The Buckthorn is a hardy, rapid growing, fine hedge plant; but neither so thorny nor so elegant in foliage as the Osage Orange.

The Pawlonia.—(J. C., Mechanicsville, N. Y.) It is true that this tree can be propagated from pieces of the roots; but it does not follow from this that it will throw up suckers, unless special means be taken to produce them. We have never seen the appearance of a sucker, nor heard of any, and therefore we think apprehension on this point needless. The roots of almost any tree can be forced to emit suckers.

Onions.—Will some of our good kitchen gardeners answer the following:

> If it would not be out of place, I should like to ask you a few questions in regard to the cultivation of onions. We have anxiously looked over the Farmer for information on this subject, but could find none. We wish to know when to plant to ensure a good size; what time to gather seedlings, as we use top onions, or sets; whether it is of use to break the tops to increase the bottoms. We have experimented three years, and have had no success in preserving seedlings through the winter. Please inform on this subject. S. A. D. F. K.—*Columbus.*

NEW AND IMPORTANT INSURANCE.

Northern New York Live Stock Insurance Co. Plattsburgh, N. Y.

INCORPORATED by the Legislature of the State of New York, July, 1851. Horses, Cattle, and all kinds of Live Stock insured against death, by the combined risks of Fire, Water, Accidents, Diseases, &c. Capital, 50,000.

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October 18, 1851.

This company is now organized and ready to receive applications for insurance. It is confidently believed that the owners of valuable animals will avail themselves of the advantages offered by this mode of protection.

The company have adopted such rates as, they believe, will furnish the means of paying ordinary losses, without resort to an assessment. But to guard against extraordinary losses, which may arise from contagious diseases or epidemics, it becomes necessary to require premium notes.

TO THE OWNERS OF HORSES AND LIVE STOCK.

Office of the Northern N. Y. Live Stock Ins. Co.,
PLATTSBURGH, August 16, 1851.

The Directors of the above Company, incorporated by the Legislature of the State of New York, at its extra session in July, 1851, respectfully request your attention to the following facts bearing on this subject.

1st. Value of this class of property. By the census of 1845, there were at that time in the State of New York, as follows:

Horses.	
One-half a million, ...	505,155
Neat Cattle.	
Over two millions, ...	2,072,330
Cows Milked.	
Nearly a million, ...	999,490
Sheep.	
Over six millions, ...	6,443,855
Hogs.	
Over one million and a half, ...	1,584,344

Without making any estimate of the value of this property, it is apparent that it is immense; extending to every inhabited spot, and essential to the health and comfort, almost to the existence of the inhabitants.

2d. These animals are subject to disease and accident. It has been asserted as a fact which can not be disputed, that the aggregate loss upon this species of property is *greater* than the losses by fire; at all events, it is a fact undoubted that the annual loss is very great, and the owner is left unprovided with any means of security against the hazard incident to this description of property.

3d. The knowledge of this risk is one of the leading hindrances to improvement in the breed of that useful and noble animal, the horse.

Men of capital are slow to invest large sums in a valuable animal, whose loss they must every day risk, to the amount often from five hundred to a thousand dollars, in every valuable breeding horse.

With the ample security to be afforded by sound Insurance Companies, the investment of capital in horses and live stock may be made as safe and safer than the carrying of freight on the seas and inland waters. Marine Insurance has rendered this last business steady and profitable; while without it, it would want the confidence which that branch of business now commands. The absence of this Insurance in the case of live stock is universally felt.

While the owner of real estate can command half or two-thirds of its value, when needed for an emergency; while the owner of the ship, "the plaything of the wind and waves," may obtain any reasonable advance: the owner of equally valuable property, invested in horses and cattle, can not obtain a dollar. The only exception being fat cattle destined for market. In vain does the owner of the horse appeal to his industry or usefulness. The answer is, that his property is liable to disease and accident, and that as security it is utterly worthless.

4th. The Insurance principle comes in, and does for him what life Insurance has done for the young beginner in trade, taking away the risk arising from the uncertainty of life.

It will do for him what Fire Insurance has done for the owner of personal property; placing him nearly on a level with the owner of real estate.

It will do for him what Marine Insurance has done for property "afloat," taking away or equalizing the risk of the elements.

5th. In short, if Life, Fire, and Marine Insurance, are proper and expedient; so is Live Stock Insurance: as they all rest on the same foundation — that of mutual help and assistance.

Your aid is respectfully solicited in behalf of the Company, the first chartered in this State for this object. The Directors intend it shall be prudently conducted, and one which shall deserve the confidence of the public.

Our Capital is fifty thousand dollars; and when estimated in view of the liabilities we seek to assume, will be found as large or larger, in proportion, than the usual capital of Fire, Life, and Marine Insurance Companies; those Companies often taking single risks of from three to five thousand dollars, while in our case no single risk will exceed four hundred dollars.

Terms of Insurance will be furnished by Agents of the Company.

New York Agricultural Warehouse.

A. B. ALLEN & CO.,

189 & 191 *Water Street, New York.*

PLOWS of a great variety of patterns and different sizes calculated for sward and stubble land, wet meadows and recently drained swamps, where roots abound. Among these plows, also, are the deep-breaking-up, flat-furrow, lap-furrow, self-sharpening, side-hill, double mould-board, corn, cotton, cane, rice, and subsoil, with single or double wings.

HARROWS—Triangular, Square, Geddes, and Scotch.

ROLLERS with iron sections one foot long, and of different diameters. These can be arranged on an iron shaft of any width.

CULTIVATORS of upwards of twenty different kinds, steel tooth and cast iron.

SEED SOWERS of six different kinds and prices.

HORSE POWERS—Endless chain and circular, of wood or cast iron.

THRESHERS, with or without Separators.

GRAIN MILLS of cast iron, and burr stone, to work either by hand, horse, or water power.

CORN SHELLERS, single and double, large and small, cylindrical to work by hand, or otherwise.

STRAW CUTTERS with spiral, straight, or circular knives.

VEGETABLE CUTTERS, for turnips and other roots, together with a great variety of all other Agricultural and Horticultural Implements kept in the United States, such as hoes, shovels, spades, rakes, manure and hay forks, grain cradles, scythes, snaths, &c., &c.

CASTINGS of all kinds, for plows, cotton gins, and rollers.

WAGONS and CARTS, for horse, ox, or hand.

STEAM ENGINES, for farm and other purposes.

Our Implements occupy three large stores, and we believe they make up the largest and most complete assortment in America. In addition, we have a machine shop employing upwards of one hundred men, where any articles in our line can be made to order.

A. B. ALLEN & CO.,
Feb., 1851. 189 and 191 Water St., New York.

York County Farm for Sale.

ANY gentleman wishing to remove South, can be accommodated with a good Farm of 250 acres, about 70 acres open, level, abundance of marl, orchard and small dwelling, very healthy, and good water. The residue is well set in Pine, Oak, and Chestnut, and one mile from a bold creek. Any gentleman wishing to purchase, will communicate with the subscriber. EDWARD R. COKE,
Feb. 1852.—2-2t* Burnt Ordinary, James City Co., Va.

Wants a Situation,

A GERMAN GARDENER, who has been several years in this country, and is well acquainted with the different branches of his profession. Would prefer a place where there is some glass. He is a young married man with a small family, and can be well recommended.

Address, post-paid, CHARLES [illegible], care of Dr. SPENCE, Starkey, Yates co., N. Y.

Feb., 1852.—2-1t*

Prices of Agricultural Products at the Principal Markets in the United States.—Jan'y 15, 1852.

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Pittsburgh.	
Beef, per 100 lbs.....	$4.25	a 5.75	$7.00	a 8.00	$3.50	a 4.25	$4.00	a 4.50				
do mess, per bbl..	8.25	11.00	11.00	12.50	11.00	11.50		8.00				
Pork, per 100 lbs....					5.00	5.50	3.75	4.00				
do mess, per bbl.	14.87½	15.00	15.75	16.00	15.00	15.50	14.00	16.50	$12.50			
Lard, per lb.........	9	9¼	9½	11	7	9	8	9	6½ a	7¼		
Butter, do	14	23	16	20	12	16	8	10	8	11	$0.15	a 16
Cheese, do	6½	7¼	7	8	5½	6	5	7	6½	7		6½
Flour, per bbl.......	4.81	5.25	4.50	6.00	4.00	4.50	3.00	4.00	3.05	3.35	3.00	3.12½
Wheat, per bush....	1.08	1.12½			87½	90	50	65	57	60	60	
Corn, shelled, per bu.	67	68	63	66	50	53	28	30	25	30		
Rye, do	77	78	75	77	69	70			50	55	40	
Oats, do	40	45	40	45		31	17	19	22	23	31	
Barley, do	77	80	95	1.00	67	70			55	60	46	
Clover seed, do	8½a9 pr. lb.		9 a 12 per lb.		4.50	5.00	12½ per lb.		4.50	4.75	5.25	
Timothy seed, do					1.50	2.50		2.25	1.50	2.50		
Flax seed, do	1.35	1.37½	1.60	1.65	1.25	1.50		75	1.00			
Hay, per ton........	15.00	16.00	14.00	15.00	8.00	11.00			11.00	12.50		
Wool, per lb........	30	40			30	40	30	40	26	35		
Wood, hard, per cord			6.50	7.00	4.00	4.50	3.00	5.00				

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Farm for Sale.

THE subscriber offers for sale her farm, situated in the county of Onondaga, one mile west of the village of Jordan, on the Erie canal, and adjoining the Syracuse and Rochester Railroad. Said farm consists of one hundred acres, and is well adapted for grazing. There is about ten acres of muck, on which carrots, beets, &c., grow to an enormous size. Also, on the farm, and in immediate vicinity, are large deposits of marl. Eight acres wood land. Good dwelling house, barn, and fruit.

For further particulars, inquire of Z. P. Mason, Jordan, Onondaga Co., N. Y. TRIPHENA AUSTIN.
Feb., 1852—2-1t*

Wanted,

A FARM containing about 50 acres clear new land—some limestone bottom preferred—with about 40 acres maple or oak. Also a good house and out-buildings. Must be in a good farming district and convenient to churches and schools. Would be preferred on the New York or New Jersey shores, with good facilities for carriage to market by railroad or steamboat.

Address letters, post-paid, to Rice Lawlon, care of John Spring, 16 East street, Boston, Mass., to which immediate attention will be paid; also stating description of place and price.

Farm for Sale.

THE subscriber will sell his farm, containing 234 acres, pleasantly situated on a main road, 2½ miles west from the village of Attica, through which place the Buffalo and Rochester, and Buffalo and New York City Railroads pass. Said farm is well adapted to a dairy or stock. House 26 by 46, well finished and nearly new. Good barns and out-houses. Two large orchards with plenty of grafted fruit. I will sell for $25 per acre; payments made easy. Ill health induces me to sell. L. PECK.
Attica, Wyoming co., N. Y., Feb., 1852.—2-1t*

Prouty & Mears' Center Draught Plows.

A LARGE assortment can be found at the State Agricultural Warehouse, No. 25 Cliff street, New York.
Feb., 1852.—2-1t A. LONGETT.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, Jr., Editors.
P. BARRY, Conductor of Horticultural Department.

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DANIEL LEE,
December, 1851. *Rochester, N. Y.*

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STEREOTYPED BY. J. W. BROWN, ROCHESTER, N. Y.

THE GENESEE FARMER

Vol. XIII. ROCHESTER, N. Y., MARCH, 1852. No. III.

AGRICULTURAL CHEMISTRY.

NUMBER III.

Specific Gravity of Soils.—Cohesion.—The specific gravity of soils is ascertained by finding how much water a given weight of dry soil displaces. To dry a soil where one has no apparatus designed expressly for the purpose, it may be spread to the amount of four hundred grains on a quarter of a sheet of white foolscap writing paper, which may be placed on another piece of white paper laid on a heated stove. This should be as hot as it can be and not char or burn the paper. The soil should be stirred with a glass or steel rod, or with the blade of a clean knife, to hasten the drying. A paper with soil upon it may be put upon an earthen plate and set in a common cooking stove hot enough nearly to bake bread, where it will, if properly spread out on the paper, dry in thirty minutes. Any heat that does not burn the paper will not consume nor char the mold, or organic matter in the soil. Of this dried soil, weigh out say 357 grains, which may be put into a specific gravity bottle which will hold 1000 grains. (One of a different weight will answer, if the weight be known.) A bottle holding 1000 grains of water ought, when 357 grains of dry soil are added, to weigh 1357 grains, provided none of the water was displaced by the earth. But it is obvious that so much space in the bottle as the solid matter introduced really filled, the water must leave as the soil was added.

Again; if the soil weighed precisely the same per cubic inch as the water, then it is clear that if the bottle were half filled with water and half with earth, the two together would still weigh 1000 grains, or the same that the water alone did; but the result of the experiment may show that the addition of 357 grains increases the weight of the contents of the bottle from 1000 to 1285 grains. Now, as the whole of the water and soil weigh 1357 grains, it is plain that if we subtract 1285 from 1357, the difference is 72 grains, which is the exact weight of the water displaced, and the exact volume of the soil weighing in the air 357 grains—water being the standard. As 72 is to 357, or as the weight of the water is to that of the solid of equal volume, so is 1000 to 4958. In this case the soil or other mineral is 4 and nearly 96-100 times the specific gravity of water. This is heavier than any soil, but not so heavy as iron filings.

The specific gravity of solid bodies of considerable size can not be determined in the manner above described; but it may be the circumstance that water partly supports solids immersed in it, which support is greater or smaller as the body is lighter or heavier compared with its volume. A solid, in order to sink in a liquid, has to displace and push upward a quantity of it equal to its own bulk, and to resist the weight of the liquid, or its tendency to sink down again. To illustrate the principle of the phenomenon under consideration, let us suppose one has a gold coin which, weighed in the air, gives the right result as to the quantity of metal present; but there is a well grounded suspicion that the coin contains too much copper or silver. In what way, short of a chemical analysis, can the fact be ascertained? If the coin contains a lighter metal than gold, (and copper and silver are lighter,) to give the proper weight in the atmosphere it must be as much larger in bulk as there is an excess of silver or copper. Hence, if the coin be suspended in water by a fine silk thread attached to the bottom of the pan connected with one end of the balance, and weights be placed on the opposite pan or scale, less weights will be required to support the coin the larger its volume as compared with its weight in the atmosphere—the support of the water lifting it upward equal to the water displaced. By weighing a coin in the air and again in pure water, if it give the right weight in both instances, it can hardly fail of being genuine. Platinum being a heavier metal than gold, formerly when gold was comparatively dearer than it now is, alloys of gold, copper, and platinum are said to have been formed so near the right specific gravity, that nothing short of an analysis would expose the fraud. Since platinum has risen in price by its extensive use in tipping the ends of telegraph wires, and gold has become unusually abundant, any fraud of this kind would yield no profit if undetected.

All weighing, whether performed by the chemist or the farmer, have for their object to measure the force of gravity of the body weighed. A variety of experiments may easily be tried to illustrate the influence of the surrounding medium on the gravity of bodies, whether in air, water, or quicksilver.

Cohesion is a term used to designate that force which keeps the molecules of matter together. It is usually called "the cohesion of aggregation;" or "attractive aggregation." If there was no force antagonist to this, the whole universe would be one solid, immovable mass of matter. The force of *repulsion*, however, so strikingly shown in the air that surrounds the globe, serves to prevent such an aggregation of molecules. In splitting logs for rails and staves, and rocks for building purposes, the farmer has occasion to overcome the cohesive force of both organized and mineral matter. Cohesion is strongly developed in beating gold into leaves of extreme tenuity. A single grain will readily cover 1400 square inches; and with a microscope the gold on the millionth of a square inch is distinctly visible; so that without parting with its cohesive attraction, gold may be divided into particles of at least 1-1,400,000,000 of a square inch in size, and retain the color and other properties of the largest mass.

This force of molecular cohesion acts only at a distance so minute as to escape the most delicate examination. The fragments of a piece of glass or metal just broken, when laid ever so closely together, have no tendency to unite again; but if the surfaces be pressed together, union may take place, though only in a few points, and imperfectly. Yet when the surfaces of plate glass laid flat on each other, and subjected to considerable pressure, are allowed to remain for some time, they are found to grow together so completely, that thick masses may be ground as if they had always formed a single piece. Surfaces of lead may be cut so smoothly that, when pressed together, the cohesive force is brought into play with considerable power. The viscidity of fluids is thought to arise from the same natural law, as is also the globular form of a drop of rain. When a drop of water spreads over a large surface of wood or other solid, the cohesive force between the particles of water and the solid is stronger than that between the particles of water for each other. In the wetting of dry soils, this diffusion of water by the molecular attraction of liquids and solids is strikingly exemplified.

Clairaut found, as the result of his mathematical investigations, that all the phenomena of capillary tubes depend on the relation of two forces: 1st, The cohesion of the particles of the fluid for each other. 2d, The attraction of the solid for those of the fluid. When a glass tube is dipped into different liquids, if the force of the attraction of the glass is less than half the force of cohesion of the fluid, the fluid will be depressed in the tube, and not rise to its hydrostatic or proper level. If the attraction of the particles of water for each other and for the glass be equal, the fluid will come precisely to its level; and if the attraction between the water and the glass be greater than between atoms of water, the water will rise steadily in the tube. This explains the law of *capillary* attraction and circulation.

A body, when acted on by an extraneous force, if brought into a smaller space, it is said to be *compressible;* if, when the pressure is removed, the body regains its original volume by the mutual repulsion of its own particles, it is said to be *elastic;* if, on the contrary, it remains compressed, it is called *inelastic.* In nature there are but few bodies perfectly elastic, and none which are perfectly inelastic. When the pressure is removed from the so-called inelastic solids, if they have been compressed, a slight expansion occurs; while in gases and liquids the return to the original volume is complete. Solids and liquids are so slightly compressible, that delicate tests are necessary to determine it. A pressure of 400 lbs. upon a square inch of water diminishes it the 1-1000 part. The compressibility and elasticity of gases are nearly perfect and uniform. Thus, air which under a weight of 20 lbs. occupies 100 cubic inches, is reduced in volume to 25 inches by increasing the pressure to 80 lbs.; and it expands to 400 cubic inches if the weight be reduced to 5 lbs. Barometers indicate variations in the weight of the atmosphere, caused, doubtless, partly by the rotation of the earth on its axis and by its course round the sun; and partly by clouds, winds, mountains, vapors, oceans, continents, &c. The essential differance between a barometer and a thermometer is, that the former has a column of mercury which is exposed to the air at its base, having, like a thermometer, a vacuum above the mercury. Hence, the least variation in the pressure of the air on the mercury in the little cup, causes it to rise or fall in the tube. In a thermometer, the mercury is hermetically sealed in the glass, and rises or falls as heat expands or cold contracts the liquid metal.

In some cases gases are brought within the cohesive forces of their particles, which modify their compressibility. Thus, if a tube full of air and a tube full of sulphurous acid gas be subjected to exactly the same pressure, the volumes will not diminish in the same degree when the pressure becomes high, but as follows:

The air as	1000	858	559	814
Sulphurous acid as	1000	851	554	801

In some other gases the same variation has been observed. (KANE.)

Some gases have been liquified by great pressure, and frozen by their sudden expansion when the pressure was taken off by giving vent. Other gases, such as oxygen, hydrogen, and nitrogen, have been subjected to a pressure of 800 atmospheres, equal to 12000 lbs. to the square inch, without causing any change in their natural elasticity, or other properties.

Heat may be regarded as an antagonist power to that of cohesion, and tends to render the molecules of a body repulsive to each other, and to separate them to greater distances than they had been before. When a solid, like salt or sugar, is dissolved in water, the phenomenon is explained by saying that the particles in the solid have a greater affinity for water than for each other. Hence, their previous cohesion is destroyed; they separate in the mass of liquid, which constitutes their solution, or the disappearance of the solid. Substances are *soluble* or *insoluble*, according as the force of solid or liquid cohesion, or attraction, prevails among their several atoms. Bodies insoluble in water, like resins, dissolve in other fluids, such as alcohol, ether, and Seneca oil.

◆

CULTURE OF TOBACCO.

We are receiving many inquiries respecting the feasibility of raising tobacco in the northern and western States, and the best mode of culture adapted to this climate; and though we do not wish to see tobacco raised here as a common crop, feeling assured that it can not be adopted, except on farms contiguous to cities where a large supply of manure can easily be obtained, without ultimately materially injuring the soil; yet we will give the mode of treatment practiced by some who have successfully cultivated it here for a few years past. A dry, sandy loam produces the best *quality* of tobacco; and it is quality and early maturity rather than quantity that should be the aim of the grower.

The seed is first sown in beds, and the plants when about five inches high transplanted out into the field prepared for them. In the southern States, the seed beds are slightly charred or burnt previous to sowing, so as to destroy all the weeds. The beds should be in as warm a situation as possible. If manured with barn-yard manure, care should be taken to have it free from weeds, &c.; and we should prefer to use Peruvian guano or superphosphate of lime sown on the top of the bed or applied as a liquid manure. A table-spoonful of seed will sow a bed ten yards long and ten yards wide. It should be sown as early as the weather will permit. The plants make their appearance in about twenty days, and in six weeks after sowing they are ready to transplant into the field.

The soil should be pulverized to a good depth, and marked off in rows about thirty inches each way, and then the first showery weather the plants should be transplanted; and if any of them die, their places should be immediately filled up. We would suggest, for trial, the application of a tea-spoonful of superphosphate of lime placed below the plant when transplanted. From the magical effect of this manure on turneps, forcing them along during the first stages of their growth, and favoring early maturity, we think it will be a valuable manure for tobacco; the aim of the planter being not to raise a large gross crop, but a small one *perfectly elaborated*, containing a low percentage of ash. For this we believe superphosphate of lime will be found eminently useful.

The after treatment of tobacco is similar to that for the corn crop, the cultivator or horse-plow being kept continually at work as long as a weed is to be seen. The weeds close to the plant should be at first pulled by hand, and afterwards the hoe should be freely used. It is recommended to turn turkeys or other poultry into the field, to destroy insects and worms which sometimes utterly destroy the crop.

When the plant begins to put forth seed heads, which it will indicate by having two leaves of the same length, it should be topped either by hand or with a sharp knife. Shortly after topping it will begin to send out suckers, which must be constantly removed, as they take away much nutriment which is required by the leaves.

The time of harvesting will depend on the culture, soil, and climate. In this vicinity it is ready about the middle of September. It should be allowed to get fully ripe—the the riper the better, though there is great risk in letting it remain out too long, as any early frost may completely spoil it, or heavy rains do it much injury. It may be cut with a sharp knife, such as is used for cutting corn; the head of the plant laid towards the sun for a few hours, and then carried to the drying house.

If the farmer does not grow more than an acre or so, he will probably find room in the barn or some shed, in which to dry the tobacco. This he will best do by getting long poles, and placing them about a foot apart across the building, and to these hanging the tobacco plant by simply fastening the twine at one end of the pole and winding it around the whole length, thus binding the plants to the poles by the butt ends. The plants should not touch each other, and a free circulation of air must be allowed in the room.

If a large quantity of tobacco is grown, and the farmer intends making a business of it, it will be necessary to build a drying shed or room on purpose. The more airy this is built the better, providing the rain is kept out. The size will of course depend on the number of acres cultivated; but it is better to have too much than too little room, as there is great danger of spoiling the crop if placed too thick in the drying room. When sufficiently dry the plants are taken down and the leaves stript off, laid in heaps about four feet high to *sweat* for a few days; they are then tied in bundles with a moist leaf, placed in boxes, and sent to market. Tobacco grown in Western New York, and treated in this way, is worth in New York about eight cents per pound. 1500 lbs. per acre is an average crop here.

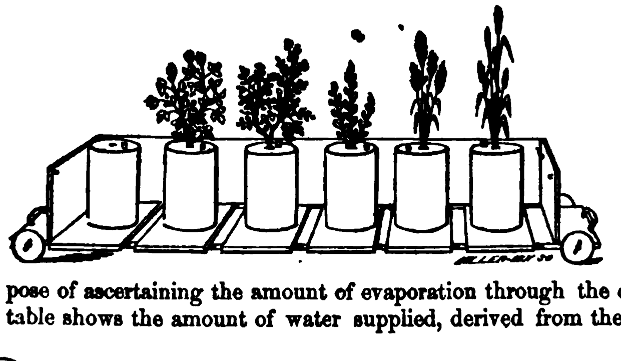
We have said before it is an exhausting crop, and we should be sorry to see its cultivation extensively adopted by our farmers in the wheat growing districts. In several of the Western States this crop can be profitably cultivated, as the soil and climate is well adapted to its growth, and the cost of transportation *on the money value* is comparatively nothing to what it is on wheat and Indian corn; or, to make our meaning plain, it costs no more to transport 60 lbs. of tobacco than it does a bushel of corn, though one is worth $48 and the other 48 cents. The same reasoning applies to wool and pork, and everything of a high price, per weight or bulk.

◆

AMOUNT OF WATER GIVEN OFF BY PLANTS DURING THEIR GROWTH.

Mr. Lawes has recently published the result of some experimental investigations of the source and fixation of the various constituents of plants, from which we make a few selections, especially in reference to the amount of water given off during their growth.

The plants taken for experiment were wheat, barley, beans, peas, and clover. The soil used was from a plot on which ten grain crops had been successively grown without having any manure supplied. There were three plants taken of each kind. One set of plants were without any manure; one set with mineral manures added; and one set with mineral manures and muriate of ammonia added. But we must confine our attention at this time to the unmanured ones. Glass jars 14 inches in depth and 9 inches in diameter, capable of holding 42 lbs of soil, were the vessels used. After the vessels were filled, plates of glass having a hole in the center about three-fourths of an inch in diameter in which to place the plant, and another near the side by which to supply the water when it was needed, the latter one being kept tightly corked except while the water was being applied, were cemented on the top of the jars, so as to prevent evaporation from the surface. The scales employed for weighing the plants were constructed on purpose for these experiments, and were calculated to turn with a third of a grain when loaded with from half a hundredweight to a hundredweight in each pan. Between the time of planting and the full growth of the plants more than twenty weighings were taken; and weighed quantities of water were supplied whenever required. The amount of water in the soil at the time of planting was determined by analysis. The jars were placed on a truck, so that they could be easily drawn into a green-house in case of a shower. The annexed cut will give an idea of the arrangement of the experiment. The empty jar is for the purpose of ascertaining the amount of evaporation through the center hole. The following table shows the amount of water supplied, derived from the soil, and given off by the



plants, during the entire period of their growth—172 days—from March 19 to September 7. Quantities given in grains, (7000 grains make one pound.)

Description of Plant.	Total Water supplied.	Total Water obtained from Soil.	Total Water given off
Wheat,	79,800	38,727	118,527
Barley,	88,800	31,225	120,025
Beans,	87,800	24,431	112,231
Peas,	81,800	27,282	109,082
Clover, (cut June 28th,)	28,500	26,598	55,098

As has been stated, the jars were often weighed, so that the amount of water given off by the plants during the different periods of their growth could be ascertained. The following table gives the average daily loss of water (in grains) during stated periods of the experiment:

Description of Plant.	9 Days.	31 Days.	27 Days.	34 Days.	30 Days.	14 Days.	27 Days.
	From Mar. 19 to Mar. 28.	From Mar. 28 to Apr. 28.	From April 28 to May 25.	From May 25 to June 28.	From June 28 to July 28.	From July 28 to Aug. 11.	From Aug. 11 to Sept. 7.
Wheat,	14.3	40.9	162.4	1177.4	1585.8	1101.4	230.9
Barley,	14.3	60.2	445.5	1103.3	1502.0	1217.6	237.5
Beans,	9.7	59.8	179.5	885.6	1965.0	901.8	185.4
Peas,	11.2	42.9	106.4	1079.8	2092.7	877.2	..
Clover,	44.4	53.0	109.2	1478.5	..	..	..

As might have been anticipated, as the season advanced in temperature, and the mass and surface of the plants increased, the quantity of water daily given off was greater; yet towards the end of the experiment it rapidly and considerably diminished; and it is probable that the period of the most rapid circulation, as shown by the amount of water exhaled, was that of the greatest *accumulation* of materials in the plant; and that when the evaporation and apparent circulation diminished, the ripening and elaborating processes had commenced.

The clover plant was cut when in full bloom, July 28; the pea, August 11; the other plants, September 7th. The following table will give the total weight of dry matter, organic matter, and mineral matter or ash, in the plants. Quantities given in grains, &c.

Description of Plant.	Total Dry Matter.			Organic Matter.			Mineral Matter or Ash.		
	In grain.	In straw and chaff.	In total produce.	In grain.	In straw and chaff.	In total produce.	In grain.	In straw and chaff.	In total produce.
Wheat,	148.5	310.4	458.9	144.3	278.2	422.4	4.22	32.27	36.49
Barley,	188.7	276.8	465.5	182.5	237.1	419.6	6.20	39.72	45.92
Beans,	282.6	254.9	537.5	273.6	214.9	488.5	9.02	40.00	49.02
Peas,	214.7	206.3	421.0	208.0	169.9	377.9	6.76	36.40	43.16
Clover,	..	..	204.7	..	..	175.5	..	..	29.24

The above table is of little independent interest. It shows that though the soil, previous to the commencement of the experiment, had been particularly exhausted of nitrogen by the growth and removal of ten grain crops without manure; yet with no manure of any kind supplied to the plants in the jars, the grains of the beans and peas, though highly nitrogenous, thrived better than those of wheat and barley. From this it may be inferred that the leguminous plants can and do obtain their large amount of nitrogen from the atmosphere, but that the cereals wheat, barley, &c., are dependent on a supply of nitrogen in the soil. This, too, is consistent with the results of extensive experiments in the field on wheat and beans, the former being greatly benefited by the application of nitrogenous manures, while the latter and other plants of the same botanic order are *not* benefitted.

The following table will show the amount of water given off for *one grain* of dry matter, organic matter, and mineral matter, fixed in the plant:

Description of Plant.	No. of grains of water given off for one grain fixed in the plant, of—		
	Dry Matter		Mineral Matter (Ash).
	Inclusive of Ash.	Organic only.	
Wheat,	247.4	268.8	3111.2
Barley,	257.8	286.0	2618.8
Beans,	208.8	229.7	2299.5
Peas,	259.1	288.7	2527.3
Clover,	269.1	314.0	1884.2

The organic matter was probably derived principally from the water and atmosphere, 268 grains of water being necessary to supply one grain of organic matter in the wheat plant, while in the bean but 229 is used. This would also indicate that the bean possesses the power of abstracting from the atmosphere more of its organic elements than the wheat plant. It is seen that for one grain of mineral matter organized, from 2000 to 3000 grains of water are passed through the plant. This affords evidence sufficient to show that few of the substances usually considered insoluble are incapable of being taken up by the plant in a sufficient quantity of rain water. These figures, when calculated to the acreage yield of wheat, clover, &c., afford some interesting facts. Thus, an acre of wheat of thirty bushels grain and an equal weight of straw would exhale during the spring and summer 355½ tons of water; or, calculated on 173 days, the duration of the experiment, 4,111 lbs. per day. An acre of clover that would make two tons of hay, would pass off through its leaves in 101 days 430 tons, or 8,600 lbs. per day; and this besides evaporation from the soil, which is doubtless great, especially in the case of wheat. The annual fall of rain in different parts of the United States, is from 30 to 40 inches. An acre of water one inch deep would weigh 120 tons. If 30 inches fall in a year, it would be on an average 19,700 lbs. per day per acre. As most rain falls when least required by the plants, the above figures are a potent argument in favor of thorough under-draining, to carry off this immense amount of superfluous water, as well as that arising from springs, which is equally pernicious to the growth of plants.

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FLAX CULTURE.

There is much discussion in Great Britain at the present time, as to the necessity of paying $45,000,000 to foreigners for Flax, when their own climate is equally adapted to its growth as that of Belgium and other European countries. It is said that when wheat was from $3 to $4 per bushel, land that was not well adapted to its growth was sown, and though the yield was small, yet, from the high prices obtained, it was profitable to grow it. But now, when wheat is but $1 per bushel, this land can no longer be cultivated with wheat without *serious loss*. What, therefore, shall be done with it? The reply of many intelligent practical farmers is, "cultivate oats, peas, beans, turneps, and flax;" and there can be no doubt that if free trade continues, which it undoubtedly will, a much smaller area of wheat will be sown in future in England. The same thing is true in relation to France. Free trade with England promised high prices for the surplus wheat and a large breadth of land was sown in consequence; but prices are so low that wheat culture in France is anything but a profitable business and will not be so extensive as in the last few years. We therefore predict somewhat higher prices for the future.

At the Penrith Farmers' Club, Mr. Rome, a practical farmer who has been engaged in the culture of Flax for some time, gave a lecture on the subject from which we will make a few extracts:

"The value of a crop of Flax, standing in a field, is from $40 to $60 an acre—the purchaser to pull the Flax. The yield of Flax will vary from 30 cwt. to 40 cwt. per acre; the produce of seed about sixteen bushels. The price of the Flax, after threshing out the seed, $14 to $15 per ton.

"Soils.—The flax crop may be grown with advantage on all moderately cohesive soils, resting on a sound clay subsoil, providing the land is naturally dry, or thoroughly drained; but gravels or very light soils, or lands upon a weak tilly subsoil, are not suited to its growth.

"Rotation.—Flax will succeed best after Clover sod, or Oat stubble properly prepared on good land; and after a white crop following a green crop, or after potatoes or bare fallow on inferior land.

"Preparation of Soil.—Deep plowing in early autumn by one plow following another in the same furrow, is necessary to the success of the crop under all circumstances, (except when the land has been previously subsoiled), to break the crust or pan formed below the surface soil, so as to allow the roots of the Flax and the surface water to go freely down; a second furrow will in some cases be necessary in Spring before sowing, but generally running through the soil with the cultivator will be found preferable. Dry lands should be laid into flats, but cold ground ought to be plowed into twelve feet ridges, very slightly raised in the centre; the manure should then be applied, the land well harowed and rolled, the seed sown on the rolled surface and harrowed in with light seed harrows, taking care to keep the horses as much off the ridges as possible on cold land. It is very desirable that the ground selected for flax should be perfectly clean to begin with.

"Manure.—Superphosphate of lime, at the rate of four bushels per acre, has proved to be the most suitable manure for the flax crop. Guano raises a soft inferior fibre and injures the crop; and farmyard manure is not approved of. The crop is found to derive most of its nourishment from the atmosphere and the subsoil.

"Seed.—The best seed is Riga, or the produce of this country, grown from Riga seed the previous year. Great care is necessary in the selection of the seed, so as to get it plump and heavy, and clear of the seeds of weeds. The seed should be sown at the rate of three imperial bushels on good land, and 2½ imperial bushels per acre on inferior land, as soon after the 20th March as the land can be got into proper order, and the weather will permit, but not later than the 20th April. Great care should be taken that the seed is distributed evenly over the surface. It is not desirable to sow grass with the flax crop, as it usually injures the fibre of the flax unless sown after the crop has been weeded. A crop of rapè may be taken after flax with great advantage on good land, the same year, and the ground sown down with grass seed if desirable.

"Weeding.—If clean land has been selected for the crop, and plowed early in the autumn and exposed to the winter frosts, few weeds will generally appear, if the seed used be thoroughly cleaned; but if there be any, they must be carefully pulled. This operation is best done by boys and girls properly superintended. It is necessary that they should always work facing the wind.

"Pulling.—The crop is ready for pulling when the seed in the boles is beginning to change from a green to a pale brown color, and the stalk becomes yellow for about two-thirds of its height from the ground; this is rather a nice point to determine and requires attention, as pulling too soon or allowing the crop to get too ripe are both injurious to the fibre. In pulling, it is necessary to clean the flax from all weeds (if any) to pull it when perfectly dry, to keep the root ends even, and tie it up in small sheaves to be stooked up and stacked when perfectly dry and thoroughly winned, which will be in the course of eight or ten days after pulling."

Some have thought the flax crop an exhausting one, but it is not considered so either by farmers who have cultivated it or by agricultural chemists. Dr. Anderson, chemist to the Highland Agricultural Society, states, it is scarcely possible that the flax crop should produce greater exhaustion than a grain crop, certainly not greater than wheat; if a portion of linseed or oil-cake is consumed on the farm, we should have less exhaustion than from a grain crop. Mr. Brisco and Mr. Barker have both sown clover and grass seeds with flax and other grain crops—the ground occupied by the flax producing double the eatage in the following autumn of that produced where grain crops were sown, while the grass on the ground still remains superior.

Mr. C. Bedell, Berlin, Mahoning Co., Ohio, writes us his method of raising flax, and the one usually adopted in Northern Ohio. "If on sod ground, plow *very deep* in the spring, as early as frost will allow; harrow well till it is mellow; then sow about three pecks of seed per acre, and drag it lightly. We think three pecks little enough on sod ground, but less might do on corn stubble or fallow. It is less labor, covers the ground from the scorching rays of the sun, and leaves the soil in a better preparation for wheat than the old plan of summer-fallowing. We get on an average 10 bu. seed and 400 lbs. of dressed flax per acre. The seed sells here for $1.25 per bu., and the flax for 7 cts. per lb. So that a crop yields us $40.50 per acre. Some seasons, if the soil is well prepared, we get 16 bu. per acre, and 600 to 700 lbs. of dressed flax. I do not think it impoverishes the land so much as a barley or an oat crop."

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SPRING AND SUMMER WORK.

The intelligent farmer will have all his plans of culture for the succeeding year formed in his mind the autumn beforehand. During the winter he will reflect upon them, and use every means to increase his knowledge; so that he may perform all his operations with facility and economy. He will also make and repair many of his implements, and get everything ready for spring; so that when it comes he can avail himself of the first opportunity to commence operations. The shortness of our *working season* renders this forecast doubly necessary and advantageous.

Barley is a crop which has paid very well for the last few years, and the demand is increasing; so that we may expect good prices for the future. Light, dry, sandy loam, is best adapted for this crop. If the soil is rich, it may be sown after wheat; the earlier the better, providing the soil is dry enough to work well. Two bushels of seed to the acre is usually sown, though we think two and a half, and in some instances, three bushels, is none too much. The land should always be rolled after it is sown. If not in good condition before, it will do to roll when the barley is an inch or two out of the ground. To insure a good crop, it should always be sown the first or second week in April.

Oats should be sown as soon after the barley as possible. They will grow on almost any kind of soil, from a stiff clay to a black muck. The heavy land, however, yields the heaviest weight per bushel. Two to three bushels of seed are generally sown per acre. Sixty bushels per acre is a *good* crop, and is not often though sometimes obtained. There is an opinion, in some districts, that oats are an exhausting crop, and that wheat does not do well after them. We are inclined to think this view erroneous. They should be cradled and *tied up*, as they are apt to shed much if loose. One and a half bushels of oats, half a bushel of barley, and a peck of gray peas, are often sown together per acre in England. The produce is very large, and when ground, forms an excellent food for horses in the spring.

Indian Corn is, of all the cereals, best adapted to this climate; and on the rich lands of the great west, is raised in large quantities with little labor, excepting planting and harvesting. In New York and the eastern States, however, it is absolutely necessary to have the soil well and deeply pulverized, and in many instances well manured, and also hand-hoed twice or thrice, to insure a large crop. In this district it is usually planted about the middle of May. It should be marked *each way*, three feet apart, as it is then planted straighter and is much more easily horse-hoed, plowed, &c. It delights in a light, gravelly loam, and does best on an old meadow or clover ley plowed the previous fall. Barn manure is always gratefully received and handsomely remunerated. Four to six grains are planted in a hill. When the corn is up about an inch it should be dressed with plaster—a good handful to a hill. Its good effect is speedily visible. Wood ashes applied in the same way is often attended with good profit.

Potatoes, till within the last few years, were considered one of the safest crops—never being attacked by insects or injured by disease; but the "potato disease," which has extended to all countries, defies conjecture to account for it, and science to provide a remedy. A well drained, light, black soil, if well manured, is best calculated to produce a heavy crop. But a dry, light, sandy soil, *now* yields the soundest and most palatable potatoes. Subsoiling for this crop has been attended with great benefit. Good, short *hog* manure is the best for potatoes. A handful of plaster on a hill, as they just break the soil, is also beneficial; and unleached wood ashes are of great benefit. Two hundred bushels per acre ought always to be raised. They should be planted about the first of May. If planted in hills they are more easily kept clean; though planted in rows about thirty inches apart and twelve inches between the setts, will perhaps yield the heaviest crop. 300 lbs. of Peruvian guano sown broadcast per acre, and plowed in, has been attended with very good results on this crop.

Carrots.—The value of this crop, especially as a food for horses, has long been acknowledged, and farmers in various parts of the country are now beginning to grow an acre or so for their own use, satisfied that while they require some extra labor to the oat crop, yet the yield is so very large as to make them much more profitable. They do very well on an old meadow or clover sod well manured, plowed in the spring, well dragged the way of the furrows, till the grass is well covered and there is an inch or two of fine, loose mold. They should be sown in rows one foot apart, as they are then more easily kept clean by hoeing. Three to four pounds of seed are sufficient for an acre. About the middle of April, if the soil is dry and warm, is the best time for sowing. Six hundred bushels per acre is often obtained, and some farmers consider a bushel of carrots equal to a bushel of oats as feed for horses.

Mangel Wurzel.—Though this root contains about 87 per cent. of water, yet more nutritive matter can be obtained per acre from this crop than any other. It is not liable to be injured by insects, and is not so susceptible of injury from drouth as ruta baga and other varieties of turneps. Land for this crop should be well drained, exceedingly rich, and plowed very deep. To insure a good crop of thirty tons per acre bulb and ten tons leaf, the land should be plowed in the fall after wheat; and if subsoiled, so much the better. In the spring, twenty loads of good barn-yard manure should be plowed in, and the land well pulverized by dragging, &c. It may then be marked out in rows two and a half feet apart, and the seed be dropped in the rows at distances of 12 to 14 inches, with 4 or 5 seeds in a hill. We would also earnestly advise that 500 lbs. superphosphate of lime (directions for the manufacture of which from bones, by sulphuric acid, will be found in our January number, page 37,) be applied per acre; this would be about *half an ounce* to a hill. Its effect, especially in giving the plants a start, is greatly beneficial, and we recommend farmers always to use it if possible. It may be purchased, or manufactured from bones, as best suits convenience. For carrots, beets, parsneps, and mangel wurzel, this substance is a great axuiliary; and for ruta baga and turneps, is the best manure that can possibly be used, costing about $4 per acre. Mangel wurzel should be sown the first week in June. They should be kept clean by means of a horse-hoe between the rows, and the plants must be singled out, leaving one in a hill. It is necessary to sow several seeds in a hill to insure an even crop. When pulled in the fall, the *leaves* should be given to milch cows, as they will make them give much more milk. The roots should be stored in the barn or cellar, for winter or *early spring* feed. They will keep perfectly good till midsummer, if necessary. They are an admirable food for sheep or milch cows, in conjunction with hay or straw.

Ruta Baga, or, as it is called in Britain, the *Swedish turnep*, where there are a number of varieties very extensively grown, does not necessarily require such rich land as the mangel wurzel; neither can such a large crop be grown. They also contain a little more water, and will not keep good so late in the spring. They are nevertheless a highly valuable and profitably cultivated crop; and for sheep, and cattle, and hogs, there is nothing better. The *Skirving's Liverpool Swede* is probably the best kind for this climate, as it is not so liable to run to seed as some others, though there are many other good varieties. In England, one and a half pounds of seed are sown per acre—*drilled* on ridges two feet apart, and afterwards hoed out twelve inches between each plant. But as drills have not come into general use, the seed might be sown in the way recommended for mangel wurzel. And be sure you don't forget to use the superphosphate of lime, applied as in the case of mangel wurzel; and then, if the soil is a light loam well plowed and drained, and the plants are kept clean, we will warrant you 600 bushels per acre, if the season is at all favorable; and we should not be surprized if you write to inform us that you had 1800.

Clover.—About ten pounds of clean clover seed is usually sown per acre, in April, on the wheat fields. It should always be rolled or harrowed in, if possible. In England, clover is usually sown with the barley crop. Red clover, as found by experience, can not there be grown oftener than once in eight years on the same soil; for if sown once in four years, the land soon becomes "clover sick." Twenty pounds of seed per acre is often sown by good farmers, in hopes of securing a crop. We have seen much heavier crops of clover grown here by the use of plaster, than we ever saw in England under the most favorable conditions of soil and manuring. Clover is often much injured by keeping sheep on it too late in the fall and too early in the spring; and it is better not to let them run on it at all in the fall, if it can be avoided. We would never let land lie with clover more than two years, as after two years there is little extension of root, and the clover is apt to die out and give place to timothy and red top, which we think as exhausting to the soil as wheat, and should never be sown except on low land not well adapted for wheat. It is to the extension of the quantity of land sown with clover and the adoption of root culture, that we confidently look for great improvement in our agriculture and increased profits of the farmers, and, as a consequence, of the entire community.

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AGRICULTURAL PROGRESS OF THE UNITED STATES.—The following letter, addressed to the editors of the *National Intelligencer*, Washington, and published in that Journal, contains facts interesting to the American people:

TO THE EDITORS OF THE NATIONAL INTELLIGENCER:—The statistics of Agriculture, so far as they have been published from the Census Office, disclose many instructive facts. To promote the farming interest, and bring some of the most prominent features of this branch of national industry under the eye of legislators and statesmen, I respectfully solicit a small space in your paper to call attention to the progress made by a nation of farmers.

Maize is the most important crop grown in the United States. It is one of the staples of every State and Territory, not excepting Oregon, whose climate is least friendly to this American cereal. The United States census of 1840 makes the corn crop of the year preceding 377,531,875 bushels. The census of 1850 shows that the crop of 1849 was 591,586,053. Increase 214,054,178 bushels. These figures indicate a gain of fifty-seven per cent.; while the increase of population was not far from thirty-four per cent. Corn being one of the most profitable crops grown any where, I have studied its increase and decrease in the several States with much interest; but a due respect for the numerous claims upon your columns forbids an extended notice of even the most abundant and remunerating product of our national industry. Allow me, however, to say that New York produced in 1839, 10,972,286 bushels; and in 1849, 17,944,808 bushels. This, for an old State whose rural population increased but little in the last decade, is a large and creditable gain. It is one of the many good fruits of her excellent agricultural societies, known all over this extended Republic, as well as in Europe.

Pennsylvania has advanced her corn culture considerably, although less than New York. Her crop in 1839 was 14,240,022 bushels; in 1849 it was 19,707,702. Gain 5,467,680 bushels. She will do better in the present decade.

Georgia has sustained an agricultural journal for the last nine years, and a flourishing State Society and others some five years. Her corn crop in 1839 was 20,905,122 bushels; in 1849 it was 30,428,540. While Georgia has added to her annual harvest of maize 9,523,418 bu. in ten years, South Carolina has increased hers only 1,549,503 bushels.

Ohio has SEVENTY well-organized agricultural societies, and an efficient Board of Agriculture. Her corn crop in 1839 was 33,668,144 bushels; in 1849, it was 58,922,783. Gain in ten years, 25,354,639 bushels.

These official statistics speak volumes in favor of agricultural societies, and legislative aid for their support. They are composed of practical reading farmers; and I am happy that men of this stamp are making an earnest effort to organize a national agricultural society. Should they, in its feeble infancy, ask for a little assistance from Congress, it is to be hoped that such small aid as State Legislatures grant to State societies will not be withheld. To say nothing of the large increase in her grain crops, New York, by giving some forty-five societies less than $8,000 a year, has increased the products of her dairies over fifty per cent. The recent census shows the immense product of over *eighty-two million pounds of butter* (82,048,823 pounds.) Cheese 49,785,905 pounds. In the production of these articles the gain from buttermilk and whey in pork making amounts to millions of dollars.

Unlike the farmers of New York and Ohio, those of Virginia have failed to discover the advantage of *united* efforts for the promotion of agriculture. In 1839 the corn crop of Virginia was 34,577,591 bushels; in 1849 it was only 35,538,582. Gain in ten years but 960,991 bushels.

With a view to correct what I cannot but regard as an erroneous judgment in that noble Commonwealth, I state the fact that from no other State in the Union has opposition been seen or felt to a national agricultural society. Intelligent business men combine their efforts and means to advance commercial, manufacturing, banking, railroad, and educational interests; and why should not farmers unite their wisdom and labors to promote improvements in tillage and husbandry? The science of combinations is as applicable to agriculture as to any other business pursuit whatever. Isolated cultivators of the earth may increase their knowledge and improve their farming operations a very little in the lifetime of a generation, but their progress will be so far exceeded by such as skilfully combine their individual powers that the former will appear to retrogade, not advance.

Agricultural improvement has taken deep root in the soil of Maryland, and her corn and wheat crops have increased faster than her population in the last decade, including the large gain in the city of Baltimore. There is reason to believe that these staples will be doubled, without any increase of tilled land, by the year 1860, if the Legislature of that State foster the plan of its State Society to establish and maintain an agricultural college and experimental farm. DANIEL LEE.

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Sheep.—I send you an account of my sheep, not thinking to excel many of my brother wool-growers, but with a wish that it may stimulate some others to pay more attention to more judicious breeding and keeping. I had 76 sheep sheared last June, which produced 406 pounds of wool, which sold for 44½ cents per pound. From 44 ewes I raised 47 lambs, which sole for $1.50 per head. I commenced about the year 1816, with a cross by a full blood merino buck with our native ewes. I have never sold off my flock, but have tried to improve it by selecting good bucks and my best ewes to breed from. Thomas Redway.—*Amber, N. Y.*

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To Relieve Choked Cattle.—J. Y. De Baum, of Spring Valley, N. Y., gives the following method of relieving choked cattle: "Tie the animal's head pretty high; take hold of the tongue with the left hand, and with the right take a leathern trace (the forward end ahead) and run it down fearlessly. The remedy is easy and always at hand, and will perhaps save your animal, while you might lose it in going after a doctor."

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Butter Making.—A subscriber, of Borodino, N. Y., informs us that he has 2 cows, 6 and 7 years old, a cross of Devon, Durham, and Native breeds, which have the last summer given in 7 months 551 lbs. of butter; from May 21 to June 21, 146 lbs.; from May 27 to June 4, 37 lbs. This, he says, is a specimen of the cows in that section.

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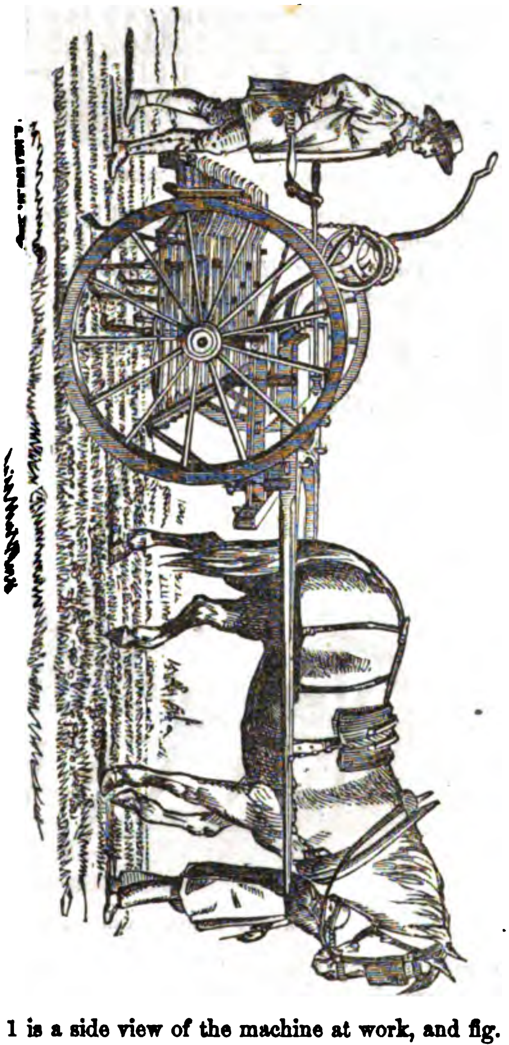
AGRICULTURAL IMPLEMENTS AT THE GREAT EXHIBITION.

BY P. BARRY, FROM NOTES TAKEN AT THE WORLD'S FAIR.

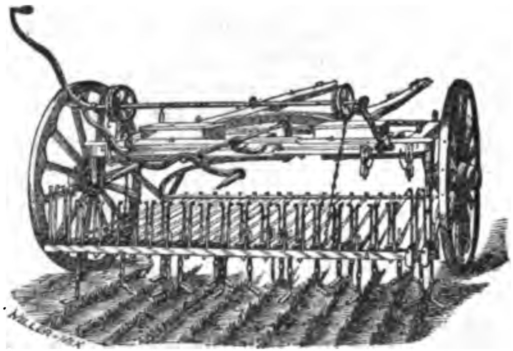
The old system of *broadcast* sowing of seeds is fast giving way in Great Britain to what is called *drilling*, which is a system of sowing in regular and equi-distant rows. This system is said to have been introduced by the celebrated Jethro Tull in the early part of the present century, not on account of its own merits, but in order to admit of hoe tillage such as is now practised very extensively in England by horse hoes. For a long time it met with great opposition, and in general, until more recently, met with very little favor. As things advanced, its merits became better understood, and, with implements of certain and efficient execution, it is becoming almost universally adopted. In this country it is also attracting attention, wheat being now mostly sown with planters or drilling implements. The advantages claimed for it are, that the seed is deposited in the earth with greater exactness in regard to *depth*, regularity, and proportion; economy of seed, in giving it a good hold of the ground in light soils so as to protect it against being drawn out by frosts or loosened by the wind when it has advanced to a heavy top growth; lastly, in admitting of hoe culture, by which the growth of the plants may be stimulated and the growth of weeds prevented. It is perhaps doubtful whether hoeing will ever be applied to growing grain crops in this country to any considerable extent. Where the soil is good, and well prepared previous to sowing, there is little chance for weeds to grow and little need of culture. It *may* be otherwise; our farmers must consider it. If this system be adopted, the drilling machines or planters must pass over the ground in straight not in zigzag lines, as we generally see over the country. At any rate, this would be a great improvement on our general culture; for nothing can well look more slovenly than curved furrows, fresh drag lines, and young growing crops. I abhor crooked plowing, dragging, and every crooked, careless operation on the land. A man who can not run a straight furrow, or drive his harrow or planter straight, ought to feel ashamed of his awkwardness.

But whether grain crops be ever horse-hoed or not, root crops will; and as their culture is becoming extensive and important, a glance at the most approved English implement may not be uninteresting. The best which I have observed in the exhibition, and one which is offered for sale in all the implement shops, and generally in use, and to which a prize medal has been awarded, is



GARRETT'S PATENT HORSE-HOE.—SIDE VIEW. Fig. 1.

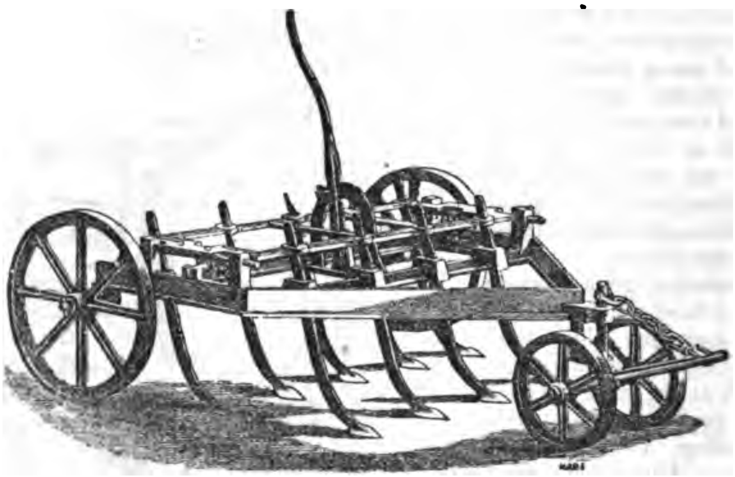
Garrett's Patent Horse-Hoe.—Fig. 1 is a side view of the machine at work, and fig. 2 gives an end view, showing the manner in which the hoes pass between the rows. It is so constructed that the shafts for the horse can be fixed upon any part of the frame, and the axle-tree being moveable at both ends, it can be expanded or contracted at pleasure to suit all lands and methods of planting. Each hoe works on a lever independent of the others, and this adapts them to all inequalities of the ground, and the hoes can also be set to any width from seven inches to thirty. The hoes are set to any



GARRETT'S HORSE-HOE.—END VIEW. Fig. 2.

particular angle by means of the crank which stands up on the left hand side of fig. 2; this is attached by chains to the jointed irons on which the levers and hoes are suspended. There is also a swing steerage to guide it exactly, as shown in fig. 1. One of these which I saw intended for seven rows, weighed 750 lbs., and cost £15. There are other sizes up to eleven rows, costing £20, ($100.) It is said that a horse, a man, and boy can hoe ten acres per day at a cost of 6*d.* to 1*s.* English per acre. The cutting blades are made of steel, and attached by screw bolts and nuts to the stalks that connect them with the levers. The whole affair is simple, and easily arranged by any workman.

The Patent Drag, Harrow, and Scarifier.—Here is an implement which our farmers may compare with their cultivators in use for preparing land for wheat and other crops. It strikes me as a most effective contrivance, and considering its weight and power, easily drawn. It moves on four wheels, as will be seen from the cut; and instead of handles like a plow, as ours generally have, it is controlled as to depth of tillage by a lever, seen on the top. The manufacturer says: "The principal novelty in this invention is the frame at the top, suspended about six inches above the lower frame, parallel with which, by means of a lever, it is moved backwards and forwards. This simple and easy movement regulates the depth of the tines or prongs in the soil; and as the implement does not require lifting, (the frame of which is at all times the same height from the ground,) all that is necessary to alter the depth of penetration is, a slight movement of the lever above referred to, which changes the inclination of the tines. It will be found to answer all the purposes of harrowing weeds and rubbish from the most foul lands; most efficient for opening, raising, and pulverising the soil; and as blades of different widths are made to fit the tines, it may be used with great advantage as a skim to take off the couch, &c.



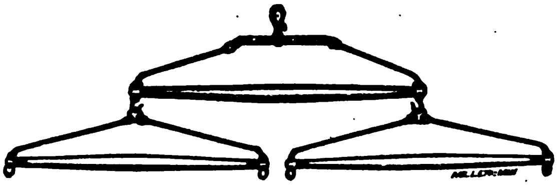
PATENT DRAG, HARROW, AND SCARIFIER. Fig. 3.

There are some late improvements in its construction, by R. Garrett & Son, which consist in substituting wrought iron instead of cast iron for the tines, without any extra cost, whereby the liability to breakage is entirely obviated; and in the application of a lever to each side of the scarifier, so that either traveling-wheel may be raised or depressed higher or lower than the other, to suit sloping grounds, and to cause the teeth to penetrate a uniform depth in the land; and this alteration may be effected while the implement is proceeding in its work.

"*Nett Prices, with one set of Tines or Prongs.*—Three feet six inches wide, with five prongs, £7; four feet six inches wide, with seven prongs, £9 10*s.*; six feet wide, with nine prongs, with side levers, £12; ditto, with wrought iron frame, £18. Points, 8*s.* per dozen. Blades, 4-inch, 10*s.*; 6-inch, 11*s.*; 9-inch, 12*s.* per dozen."

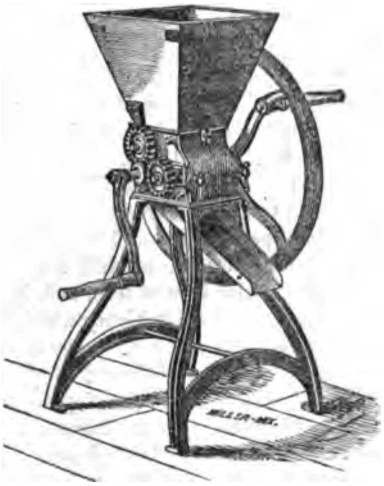
I annex the prices to show the cost compared with that of the American implements. This machine is somewhat similar to *Hyde's Cultivator*, manufactured in this State.

Improved or Patent Trussed Whiffle-trees.—The difference between these, and those in general use, is fully explained by the annexed drawing, (fig. 4.) They combine great strength with lightness. The additional strength which the trussing gives, admits of the other part being much lighter; while breaking, under any ordinary circumstances, must be out of the question. The truss is a light iron rod. This is called in England, "Harding's principle."



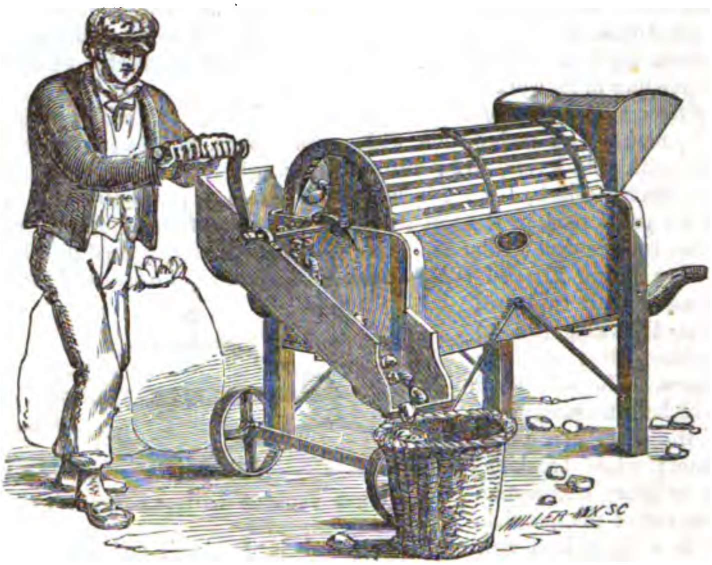
PATENT TRUSSED WHIFFLE-TREES. Fig. 4.

Grain Crusher.—This is an implement or machine of great importance. Few people in this country seem to be aware of the advantages of crushing corn or oats before feeding them to horses. Economy alone should induce their general adoption. I know from experience that for a working horse half a bushel of grain crushed is better than a bushel in its whole state. It requires considerable muscular power to properly masticate hard corn or oats, and hence it is that the manure heap shows such a large portion of it entirely whole and fit for growth. I think a good article of this kind at a moderate price would be a great desideratum to farmers. I have heard Sinclair's spoken of, but I do not know how good it is. The annexed cut represents one of the best, simplest, and cheapest, I observed in England. This mill is fixed on a cast iron frame. In the lower part of the frame are two case hardened and slightly grooved rollers; these are adapted for malt, oats, and linseed, which they bruise to any required fineness admirably; the bean roller above acting as a feed all the time. Above this pair is a coarsely grooved roller, working against a plate, which hangs independently of the frame, and is set up to the roller or drawn back by the regulator screw; this roller is intended for beans, peas, and Indian corn, which it splits in the best manner. When using it for the latter purpose, of course the screws which regulate the lower rollers must be turned back, to separate and throw them out of gear. The hopper falls back upon a hinge, to enable the person using to set the rollers, or see if there is any derangement.



GRAIN CRUSHER. Fig. 5.

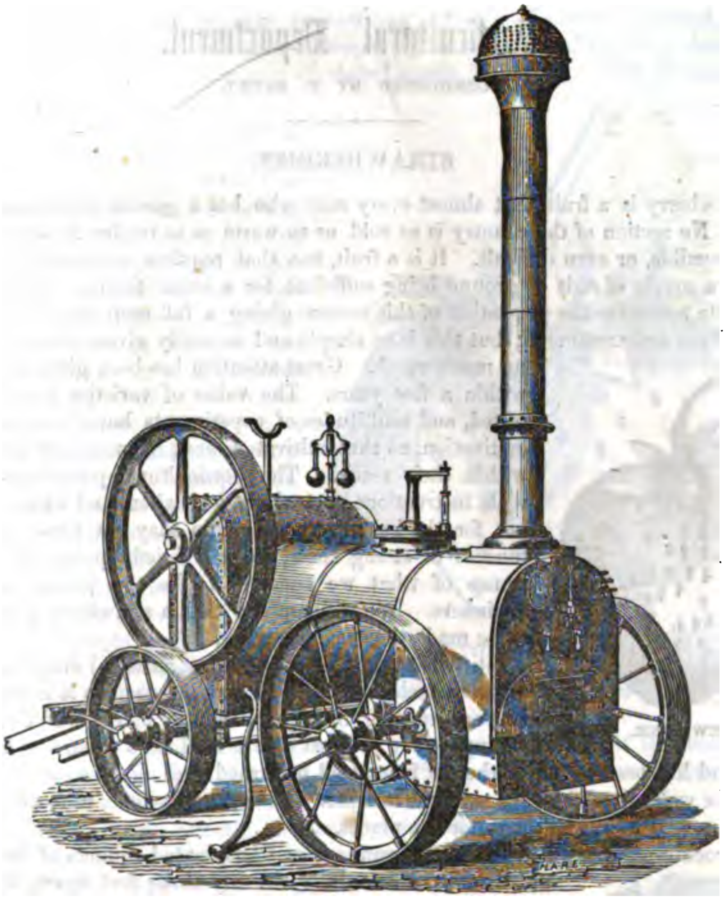
Price—*£5 15s. 6d.*; mill for crushing oats, &c. only, *£5 5s.*; mill for crushing beans only, £3 to £4; mill for crushing linseed only, £5 to £6. All these mills may be had of a larger size, for horse or steam power, if required.



CROSKILL'S ARCHIMEDEAN ROOT-WASHER. Fig. 6.

Croskill's, Archimedian Root-washer.—Fig. 6 represents this very useful machine. Where roots are fed to cattle or horses, it is very important that they should be perfectly clean; and where large quantities are consumed, washing in the ordinary way is a tedious and laborious process. In this "Archimedean" washer the roots are delivered into a hopper, and pass thence in an inclined cylinder having two chambers. In the first they are confined and washed by turning the handle in one direction; then by turning the handly round the other way, they pass into the second chamber, which is constructed in a spiral form, along which they pass and drop into a spout outside. This costs in England, $17.50.

Steam Engines for the Farm.—Steam is *the* wonderful power of the age. Wonderful in the tremendous force it creates, and in the vast diversity of operations which it is capable of performing at one and the same time with the utmost attainable accuracy. "It can not only in one mill turn a lathe, and in another weave a stocking—in one hammer circular bars of iron, and in another dress a piece of broadcloth; but the same engine can, bv the machinery which it drives in the same building, if necessary, hammer, and cut, and file, and turn—can spin, and weave, and dress—can, in fact, take the raw material at one end of the building, and by one single original motion feed itself with coke and water, which itself pumps up, move the machine which takes in the wool, transfer it to the other machines ready for its manufacture, and bring it out broadcloth ready for the tailor. Of such a power as this may not the agriculturist avail himself to carry on his multifarious operations? Why may he not thresh, and plow, and sow, and roll, and harrow, and mow, and stack, by a power which accomplishes for the manufacturer processes far more difficult?" And steam engines really are at this moment used by extensive cultivators to a very considerable extent, and in the great exhibition the large number of engines for farm purposes exhibited, furnish a striking proof that their use has passed beyond the bounds of theory. I have seen several in operation on



STEAM ENGINE FOR THE FARM. Fig. 7.

farms, and one in an extensive nursery used to pump all the water, cut and crush feed for horses, saw wood, clean seeds, and perform a vast deal of labor. The proprietor said that he had begun to look upon it as one of the most indispensable things about his establishment. Already have some pretty successful attempts been made at plowing; but in this and all other operations on the land, the difficulty to overcome will be to have them move without sinking. But in the barn-yard, if their uses never go beyond, they must be of great service in all large establishments. There is something exceedingly practical and manageable in the appearance of the nice portable engines here exhibited, capable of being drawn by a pair of horses and managed by any laborer after two or three days practice. The usual price for a four-horse power engine on wheels, is $700 to $750; of six-horse power, $800 to $850. At our last State Fair a *Portable Farm Engine* was exhibited by the manufacturers, HOARD & BRADFORD, of Watertown, N. Y. We learn that the price is, for half-horse power, $75; one-horse power, $100; two-horse power, $160; three-horse power, $250. The principal objections to the use of steam engines on the farm, are—difficulty of management, liability to explosion, and danger of fire. These objections the manufacturer states he has endeavored to obviate, but how successfully we can not at present say.

Horticultural Department.

CONDUCTED BY P. BARRY.

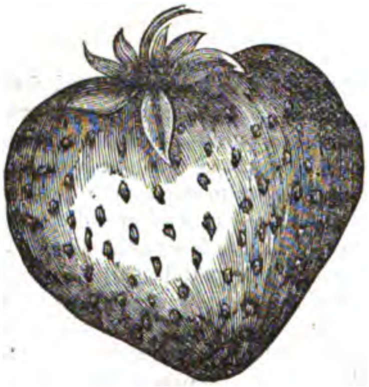
STRAWBERRIES.

The strawberry is a fruit that almost every man who has a garden cultivates to some extent. No section of the country is so cold or so warm as to render its successful culture impossible, or even difficult. It is a fruit, too, that requires comparatively a small space—a couple of rods of ground being sufficient for a small family. It also yields immediate returns—the plantation of this season giving a full crop next. It requires good culture and treatment; but this is so simple and so easily given, that it is beyond no man's reach. Great attention has been given to this fruit within a few years. The value of varieties has been well tested, and multitudes of experiments have been made in its cultivation, so that cultivators have all necessary information within their reach. The horticultural periodicals abound with instructions as to how, and when, and what to plant; but for the benefit of those who may not have had opportunities of seeing these, we will briefly point out the substance of what we conceive to be the proper course for beginners. We will suppose that a strawberry plantation is to be made the ensuing spring.

BURR'S NEW PINE. Fig. 1.

1st. The ground (if not done last autumn) must be trenched eighteen inches or two feet deep, as soon as it is dry enough to work, turning in a liberal supply of old well decomposed manure—say at least a cart load to a square rod. When the ground has been trenched thus, it should all be turned over again, so as to pulverize it and mix well all parts of the soil and manure. When this is done, rake off and level the surface, and it will be ready for the plants.

2d. Procure good, strong, well rooted runners, or transplanted runners of last season. Plant in rows, say three feet apart, the plants eighteen inches apart in the rows, for all the sorts with large foliage; the wood strawberries (*Alpines,*) may be six inches closer.



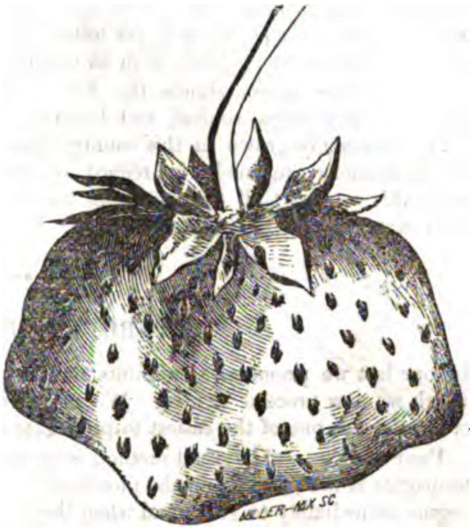
HOVEY'S SEEDLING. Fig. 2.

3d. Keep the ground clean and well hoed as an onion bed all summer, and cut off all runners as fast as they appear, unless wanted to increase the variety, and then only two or three should be allowed on each plant. In the autumn the plants will be luxuriant and large, covering half the ground, and in a fine condition to give a good crop next season. In dry seasons, mulching with a little tan bark, saw-dust, or old manure, will assist their growth very much.

4th. Wintering.—In many districts no winter protection is needed, but as a general thing a coat of three or four inches deep of straw or leaves, protecting the plants against the thawing and freezing of winter, is found very useful, greatly augmenting the vigor and productiveness of the plantation the following season. We always do it here at Rochester.

5th. **Treatment of the Plants during the Bearing Season.**—Attend to the culture of the soil as on the first season, keeping it clean and friable; keep down runners; and provide for a liberal supply of water in case of drouth. The greatest drawback in strawberry culture, with us, is dry weather at the time of the swelling of the fruit; and if we want them *large*, we must apply water *freely*—let it flow over the plants in torrents three or four times a week. Weak liquid manure, occasionally, will be a great aid in giving size. The result of all our observations at home and abroad, in regard to strawberry culture, is, that great size and heavy crops can only be obtained by a liberal supply of moisture in connection with deep rich soil. We have no space now to quote examples in support of this, but the fact is unquestionable, and it will be well to bear it in mind.

We now come to the selection of varieties, which is a matter of considerable importance. After many trials and experiments here in the vicinity of Rochester, and we ought to add extensive experiments both by amateur and market growers, the following varieties are pretty well settled down upon as the best and most profitable:



BRITISH QUEEN. Fig. 3.

Burr's New Pine, (pistillate.) Fig. 1.—A large, light red berry of the finest flavor. Productive and hardy. R. G. Pardee, Esq., of Palmyra, a first rate amateur grower, exhibited specimens at last year's exhibition of the Genesee Valley Horticultural Society, measuring *four inches* in circumference, and they received the first premium.

Hovey's Seedling, (pistillate.) Fig. 2.—One of the largest and best American varieties—extensively grown and universally admired.

Large Early Scarlet, (hermaphrodite.)—An old, fine variety. Good size, good flavor, and always bears well. One of the best for planting with the pistillate sorts.

Boston Pine, (hermaphrodite.)—A large, fine, productive variety, under high culture, but worthless with bad treatment.

Hudson, (of Cincinnati.)—A most productive variety—the great fruit of the Cincinnati market growers. The Rochester people esteem quite as highly *Burr's Rival Hudson*—a late acid variety, fine for preserving.

To insure the fertilization of the pistillate sorts, one row of the staminate or hermaphrodite varieties should be planted between every four, or in some such proportion.

It is somewhat remarkable that scarcely any foreign varieties prove profitable for our cultivation. In England, and indeed in France, the great strawberry of the day—the one that in every garden and in every market attracts one's attention particularly—is the *British Queen*, (fig. 3.) We have never seen such

ELTON. Fig. 4.

crops of strawberries anywhere as those of the *British Queen* around London, in the gardens of the market growers. It does not succeed well here; or it has not so far, that we are aware of. A few large and fine berries, say three or four from a plant, may be obtained; but nothing that can be called a crop. It needs more moisture than it gets with us, and we hope to see it yet tested under favorable circumstances. We had the accompanying drawing made from an ordinary specimen picked in a French garden.

Next to the *Queen* stands the *Elton*, (fig. 4.) This succeeds the *Queen*, being later. It is a large, conical, and beautiful berry. We are not aware of its having been successfully grown in this country, but it is worthy of further trial. In Europe no distinctions are made in regard to the "sexual" character of the strawberry, as in this country; all their varieties are staminate or hermaphrodite—that is, have both stamens and pistils perfect.

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CULTURE OF THE FUCHSIA.

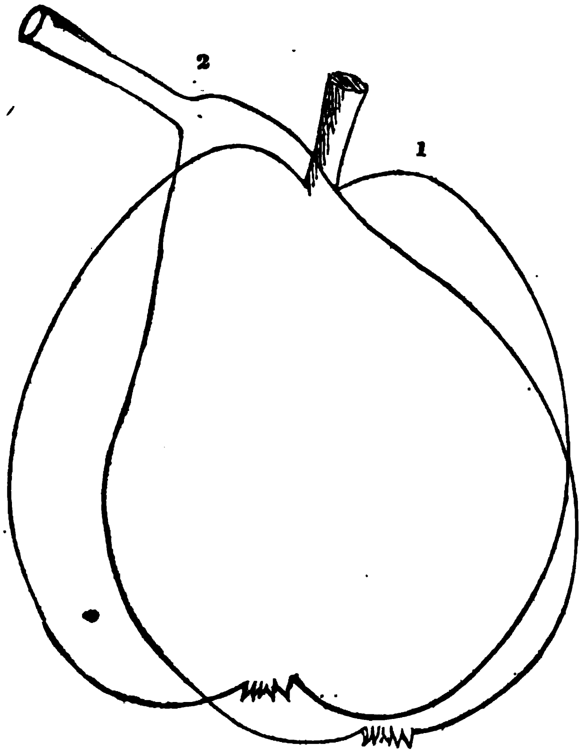
In our last we promised some hints on the propagation and culture of the Fuchsia, which we now proceed to give. We may first remark that among green-house plants or shrubs it is one of the easiest to propagate or manage.

Propagation.—The usual method is by cuttings. The plant from which we wish to propagate is brought, say in the month of February, into a temperature of 60 deg. It begins immediately to grow, and when the young shoots have attained the length of two or three inches, they are taken off, cut smoothly below a joint, and inserted about an inch into sand, or sandy earth, and if there be a bottom heat of about 70 deg. they will root in a week or ten days; but they will root, without a bottom heat, in a temperature of 60 deg. When rooted, they are potted off into small two or three inch pots, the soil being a mixture of about equal parts of sand, leaf-mold, and decayed turf finely chopped up; add to this a small quantity of old, well-decomposed manure. These must be well mixed. Put plenty of drainage in the bottom of the pot, (small pieces of broken pots). In two weeks these little pots, in a temperature of 60 or 70 deg., will be full of roots, and they may be shifted into others a size larger. When established in these, they may be removed into a cooler place, say 45 to 50 deg., and remain there till planted out, if wanted for that purpose. If disposed to grow up tall and slender, they should be topped to give them strength and roundness.

It should be observed that when Fuchsias are planted out, a cool and rather shaded place should be given them. The *Globosa*, *Globosa major*, and *Serratifolia*, are best for this purpose. When the plants are intended to be kept in pots for the summer decoration of the green-house, or drawing-room window, the shifting must be continued as fast as the pots fill up with roots. The same soil recommended above will do; but as the plants increase in size, it may be richer in manure. They must be freely watered and kept near the glass, stopping to make them branch, and tying up to give them a fine pyramidal shape; syringing frequently over the foliage will do them good. With this treatment, the young spring cuttings will, in July, be two feet high or more, and loaded with flowers till September or October. Old plants should be taken into a temperature of say 45 or 50 deg. in February or March, pruned back nearly to the old wood, potted in good soil such as described above, and shifted and managed in the same way as young ones. The fulgens; corymbiflora, and their hybrids, must be two years old before a good bloom is obtained. The *Serratifolia* blooms finely in the months of October, November, and December, and if planted out in May or June, potted in September, and housed with other plants, will be a great acquisition at a dull season.

TWO FINE FOREIGN PEARS.

Doyenne Boussock, (Fig. 1.)—This variety has fruited at Boston for several years, and has acquired there the highest reputation. It has borne for two seasons with us, and we have no hesitation in ranking it with the best varieties we cultivate. We are inclined to think that it will become a popular orchard variety, for the tree possesses great vigor and hardiness, grows rapidly both on pear and quince, and bears well. It has been described in nearly all the pomological works of recent date and begins now to attract, what it really merits, considerable attention. *Fruit*—large, obtusely obovate, resembling a very large specimen of *White Doyenne;* it tapers very slightly to the stem, where it is broad; surface sometimes uneven, but generally smooth and regular. *Color*—pale yellow, slightly marked with russet, and tinged, on the sunny side, with brownish red. *Stalk*—short and stout, pretty deeply sunk. *Calyx*—open, pretty large, in a shallow wide basin. *Flesh*—yellowish white, melting and juicy, with a rich, vinous, perfumed flavor. *Tree*—vigorous, and upright in growth. *Wood*—yellowish brown, with light specks. *Leaves*—large, thick, deep green, glossy, and almost flat; they assume, early in autumn, a fine reddish tint, like some of the forest trees. Ripe early in October, and keeps well into November.



The Duchess of Orleans, (Fig. 2.)—This is another foreign variety proved by successive trials, for a few years past, in various parts of the country, to be of excellent quality. It recommends itself by its beauty, excellence, and productiveness. *Fruit*—large regularly pyramidal, somewhat resembling in form the old English *Jargonelle*. *Color*—pale yellow, slightly marked with light russet and tinged, generally, with light red on the sunny side. *Stem*—over an inch long, rather stout, enlarged on the end attached to the branch. *Calyx*—open, set in the surface, without any depression. *Flesh*—yellowish, melting, buttery, slightly musky—rich and delicious. *Tree*—moderately vigorous, erect; young shoots wavy in habit. *Young wood*—reddish brown, and thickly covered with oblong, gray dots. *Leaves*—of medium size, flat, and of a peculiar yellowish green color. Last season we had finely ripened specimens, picked green, on the 25th Sept. We had others picked later, about the middle of October. It requires to be picked early and ripened in the house. When left to ripen on the tree it loses its flavor and becomes quite insipid.

PERPETUAL ROSES.

The classes of Roses denominated Perpetuals on account of their blooming at intervals several times during the season, are fast superceding those that bloom but once, unless it be hardy climbers and pillar roses, whose merits are not solely their flowers. Amateurs, who turn to the nurserymens' catalogues and find Remontants, Bourbons, Noisettes, Teas, &c., enumerated, find themselves at a loss in regard to the particular characters and peculiarities (of appearance) of each. We have often been solicited to point out the distinctions, and intended to do so, as well as we could, when we found the following in a French journal and immediately translated it into a sort of English. We must say for it that we have not found in all the Rose books we have read, an explanation so concise and satisfactory. We beg those of our readers who cultivate Roses, to note it well and extend their comparisons on the indications given. It is always satisfactory for one to know what they have, and if we have but one Rose in our garden, it will augment its interest, if not its value, to know what class it belongs to.

CHARACTER OF THE REMONTANT OR PERPETUAL ROSES.[*]

The greater number of the catalogues of nurerymen who devote themselves to Rose culture, do not offer to amateurs any means of judging whether the varieties which they sell belong to the sections in which they are classed. A simple name designates these sections and the varieties which naturally approach each other the nearest are often found the furthest apart, on account of the alphabetical order in which they are inscribed in the merchant's catalogue.

Having been frequently consulted by amateurs to point to them the precise character of each of the sections of Roses, I have endeavored to abridge them in a few words, following the method of botanists, who assemble under a generic name all the species most alike in their common characters.

The seven principal sections are, The Portlands, called Perpetuals; the Hybrid Remontants of Portland; the Hybrid Remontants of the Isle Bourbon; the Bourbon Roses; the Noisette Roses; the Bengals; and the Teas.

Each of the characters which serve to distinguish these sections should be taken in a general sense —separately their value diminishes to a point where it disappears completely. Take for example, that of flowers united in corymbs or panicles (clusters); in certain cases it is insufficient, for the Noisette and Bengals, which generally and under good treatment produce clusters, may produce only feeble shoots terminating in a solitary flower, on account of bad soil or treatment. The same thing, or the reverse, may manifest itself in other selections,[†] and the great similarity existing between certain subjects in different sections confounds the one with the other. It is then only by much practice, and the aid of the assemblage of many characters, that we are able to distinguish Noisettes from Bengals, and these last from the Teas.

SECTION 1. PERPETUALS, OR PORTLANDS.—The Roses of this section have the thorns very fine, short, and so numerous as to cover almost entirely the branches, to which they give a brownish tint. They have erect shoots, the flower stalks short and stiff, the flowers generally solitary and ovary; seed capsule somewhat long.

EXAMPLES.—*Rose du Roi, Duchesse de Rohan, Julie, Krudner; Bernard, La Favorite, &c.*

SEC. 2. HYBRID REMONTANTS OF PORTLAND.—These have thorns, hard and sharp, variable in strength and length; the shoots erect, and their habit similar to that of the Portlands. They have also a lengthened capsule, and give often one to five or seven flowers which form a bouquet erect and stiff at the summit of the branches. The Four Seasons Rose gives a correct idea of their habit and flowering.

EXAMPLES.—*La Reine, Baron Prevost, Jacques Lafitte, Madam Laffay, Duchesse de Sutherland, Amandine, Louis Bonaparte, Clementine Seringe, Glorie d'Angers, Comte de Montalivet, &c.*

SEC. 3. HYBRID REMONTANTS OF THE ISLE OF BOURBON.—The Roses which compose this section appear to hold a middle or intermediate place between the Portland Remontants and the Bourbons, but more frequently present the aspect of the latter. The leaflets are in general strongly dentated (toothed,) but the round form of the seed capsule distinguishes them from the Portland Hybrids. The disposition of the branches—extended in a confused, irregular manner—give them also a particular aspect.

EXAMPLES.—*Clementine Duval, Comte Bobrinski, Ernestine de Barante, Colonel Foissy, Geant des Batailles, Vicomtesse de Belleval, &c., &c.*

SEC. 4. BOURBON ROSES (Rosiers Isle Bourbon).—This section comprises the Roses which have the wood very smooth and glossy, the side shoots often short and then terminated by a single flower;

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[*] CARRIERE, formerly Chief Florist at the Museum, Paris, in the *Reveue Horticole.*

[†] It is a very common thing for inexperienced cultivators to form opinions and conclusions from the first feeble growth of a sickly plant. Under such circumstances it is impossible for their true characters to develop themselves, and an opinion based upon such conditions scarcely ever fails to be wrong.—ED.

but when a branch is developed vigorously, which often happens in many varieties, it produces a longer side shoot terminated by a cluster of flowers, from three to twelve. The thorns are strong, particularly at the base, scattered, and hooked. The leaves are roundish oval, smooth, and of a deep green. The Roses of this section have the seed capsule round, and the branches developed horizontally for the most part.

Examples.—*Queen of the Bourbons, Madam Desprez, Charles Souchet, Paul Joseph, Souvenir de la Malmaison, Souvenir de 4th May, Remond, Mrs. Bosanquet, &c.*

Sec. 5. Noisette Roses.—These Roses resemble, somewhat, the Teas in their foliage, but are distinguished by a greater vigor; by their shoots being ordinarily very long; smooth bark, although more thorny, especially in some cases; by their branches being terminated by a cluster of flowers, in some cases very large.

Examples.—*Amie Vibert, Lamarque, Ophire, Rose Mille-Ecus, Desprez du Luxembourg, &c.*

Sec. 6. Bengal, or China Roses.—The Roses of this section have a smooth bark—the branches generally but little thorny; the leaves more or less elongated and toothed; the flowers disposed in clusters or panicles—the slender shoots never giving but one flower. The capsule is round; the flowers are almost invariably colored, whilst in the Teas, to which these Roses are often related, the flowers are more frequently white or yellow. There are exceptions—Tea *Bures*, and many others.* The flowers of the Bengal are rarely odorous.

Examples.—*Bengal Ordinaire* (Daily China), *Cramoisie superior* (Agrippina), *Eugene Hardy, Beau Carmine du Luxembourg, Augustine Hensan, &c.*

Sec. 7. Tea Roses.—These Roses have many characters in common with the Bengals—the bark of the shoots very smooth, with few thorns; the leaves are shining, and the flowers, often solitary, at the extremity of the branches, these being so slender that in most cases the flowers are reversed and we see them only on the lower side. The branches generally do not acquire great length, but when the plants are vigorous the branches are longer, stronger, and bear from three to five flowers in a cluster.

Examples.—*Devoniensis, Safrano, Souvenir d'un Ami, Vicomtesse Decazes, Eliza Sauvage, Bures, Goubault, Moire, Pactole, &c.*

It will be observed that the peculiarities of the flowers, as to size, form, compactness, &c., which are the really *practical* distinctions, are not taken into account. M. Carriere probably supposes them to be too changing in their nature and dependent on circumstances to be a reliable guide of any great consequence. We may add that sections 6 and 7 do not resist our winters in the open ground, and even 4 and 5 require protection in general, and yet these four sections are the most genuine perpetual bloomers.

* The exceptions in this case are almost too numerous to allow the distinction to be of much practical value.—Ed.

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Severity of the Winter.—From all parts of the South and West we hear sad reports of injury done to Fruit Trees, by the unusually intense cold of the past winter. The fruit buds on nearly all sorts of fruit trees are killed, and even young trees, very generally. Mr. Bateham announces through his paper, the destruction of the buds, and many trees, on his "Pomona farm," and he has reduced the price in consequence. A gentleman writes from Kentucky, that "in consequence of the severity of the weather here on the 21st ult., (January,) I have lost all my Peach, Apricot, Nectarine, Cherry, and Plum trees." The destruction will probably be greater than has been experienced in many years. We have examined the buds here closely and frequently, and find, up to this time, only the Peach affected, and even of it, enough of the fruit buds are good to yield a fair crop. A larger number are killed, however, than have ever been before, to our knowledge, at this season (Feb. 18). Trees of all sorts are quite safe; even tender yearlings have not suffered in the least. It fortunately happened that our coolest nights were succeeded by dark days.

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Hyacinths for Forcing.—From a large collection of Dutch Hyacinths bloomed in the green-house the past winter, we have voted the following as particularly fine. It should be known that some kinds, first rate in the garden, do not succeed at all in the house. Those of our readers who force Hyacinths in pots or glasses, will do well to make note now for use next autumn. Single—*Baron Thuyl*, dark blue; *Grand Vedette*, light blue; *Grand Vainquerer*, (conqueror,) creamy white; *Orondatus*, light blue; *Unique*, violet red; *Mars*, bright red; *Emilius*, dark blue; *Diebits Sabal hamskie*, light rosy red; *Herstelde Vreede*, rosy pink; *Homerus*, flesh color. Double—Very few of these force well, but the following are generally good: *Bouquet tendre*, light red; *Lord Wellington*, light blue; *La tour d'Auvergne*, creamy white, large and fine, the best double for forcing.

Ladies' Department.

We have the pleasure of informing the lovers of flowers that our collection of seeds arrived a few days since, and we are having them carefully put up in packages suitable for distribution, and all applicants will receive them by mail before the 1st of April. Mr. Vilmorin informs us that although the last season was unfavorable for raising flower seeds, and consequently he was able only to send us small quantities of some kinds we ordered, yet he forwarded the finest collection ever brought into the country. We are much gratified at this, as one object we had in view was to distribute much better seed than are usually kept at our seed stores. We want no better evidence than the *three thousand* applications already received afford us, that a love of flowers — a love of the beautiful creations of nature — is rapidly increasing. While the farmer increases his crops of grain, of roots and grass, by a wise system of culture, that enlarges the product without injuring the soil, and the farmer's wife improves the quality of butter and cheese, a few hours by either will not be idly spent in caring for the beautiful flowers of the field, created by infinite wisdom to refine the taste and gladden the heart. During the spring we shall give descriptions of the best annuals, and also directions for cultivation. The present month we give a figure of the Ten Weeks Stock. The plant grows from one to two feet high, with an erect branching stem, hoary leaves, and long spikes of flowers; the size and richness of these flowers vary greatly in the different varieties, and some of them are very splendid. The species is a native of the South of Europe by the seashore, whence it was introduced in 1731; but the principal varieties have been originated in England and Germany. The German varieties are particularly beautiful.

GERMAN TEN WEEKS STOCK.

For very early flowers, a few plants may be raised in a hot-bed, or in a pot in the house, to be transplanted into the open ground as soon as the weather is sufficiently warm. For sowing in the open ground, the soil should be dug deep and very finely pulverized with the rake. The seed may then be sown in drills, and slightly covered with fine earth. As soon as the plants show the third pair of leaves, if too thick in the bed, they may be carefully transplanted, leaving the plants in the bed about ten inches apart. Transplanting should be done on a damp day. If the plants are large, they should be removed without disturbing the roots. If much exposed to the wind, it may be necessary to tie them to a stake.

Editor's Table.

We are more than gratified at the evidence we are every day receiving that our efforts to furnish a *good agricultural paper*, and one so cheap as to be within the reach of every farmer, are so well appreciated by those for whose benefit we are laboring. As the large lists of subscribers come in with every mail, requiring all our time to transfer the names to our books, the conviction is thrust upon us that there is "a good time coming," and it is with difficulty that we can suppress a little self-complacency at the thought that we must have done a little to awaken that thirst for knowledge, now becoming so general among American farmers.

We are not yet able to determine what will be our circulation the present year, as "still they come," but it cannot fall far short of 50,000. For this result we are much indebted to the voluntary labors of our friends, and the friends of agricultural improvement, in all parts of the country. We are sending the Farmer now to thousands of Post offices, where only from one to five copies are taken, and where, with a little exertion on the part of our friends, the number might be more than doubled. Will not each of our subscribers at these offices consider himself an agent, and form and forward a Club? Additions can be made to clubs at any time, at the lowest club price. Those who have forwarded clubs of five can increase to eight by forwarding $1; and those who have sent $1 for two subscribers can have the number increased to five, by sending another dollar. We authorize money to be sent by mail at our risk, only asking proper care in enclosing and directing. Back numbers can always be furnished.

Our subscribers in Pennsylvania have reason to complain of the late arrival of the February number. This was unavoidable, but we think it will not occur again.

Sheep Frauds.—We continue to receive complaints from the Western States, respecting "eastern Sheep Pedlars palming off common sheep, which have not been shorn for a year or two, for valuable Merinos." But we were surprised to learn, from Mr. W. Anderson, Ann Arbor, Mich., and others, that even "some of the gentlemen who eloquently condemn such frauds in the agricultural papers," should themselves be accused of playing the same game. Such conduct is far from honorable or politic, and seriously retards the improvement of our breeds of sheep.

Annual Meeting of the N. Y. State Ag. Society.—The annual meeting of this Society was held at Albany, on the 21st and 22d of January. The following is a list of officers for the ensuing year:

President—HENRY WAGER, of Oneida.

Vice-Presidents.

I. James Monroe, of New York.
II. Lewis G. Morris, Westchester.
III. Anthony Van Bergen, Greene.
IV. Winslow C. Watson, Essex.
V. Theodore S. Faxton, Oneida.
VI. Olcut C. Chamberlin, Otsego.
VII. Charles Lee, Yates.
VIII. James McElwaine, Wyoming.
Cor. Secretary—B. P. Johnson, Albany.
Rec. Secretary—Erastus Corning, Jr., Albany.

Members of the Executive Committee—J. T. Blanchard and J. A. Cory, Saratoga; J. Butterfield, Oneida; J. B. Burnett, Syracuse; and Wm. Kelley, Dutchess.

Mr. Delafield, the President, delivered an address on the subject of the World's Fair, and presented the medals awarded by this Society, to those who had received premiums at the London exhibition.

Prof. Norton delivered a lecture on the dependence of agriculture upon science for improvement, in which he said, that Agricultural Chemistry was in its infancy; that it was not so easy a matter to become a chemist as some people imagined; that several years of study and practice were necessary to enable any one to analyse his soil and obtain results satisfactory and useful. He was in favor of an Agricultural College, but advised a small beginning; let students and teachers be provided, and the superstructure and other necessaries would follow in their turn. The lecture was well-timed, and calculated to direct public sentiment aright in respect to agricultural improvement.

There was an exhibition of fat stock, dressed meat, grain, &c., which, although only an experiment, and the weather very unfavorable, was better than could be expected, and such as to warrant a more liberal list of premiums for the coming year.

At a meeting of the Executive Committee on the 23d, it was resolved that the Fair for this year be held at Utica, on the 7th, 8th, 9th, and 10th of September, if the requirements of the Committee are complied with, which we suppose means that the citizens pay all the expenses of the Fair, except the premiums.

Inquiries and Answers.

Hot-Beds.—We cannot speak favorably of our success with cloth as a substitute for glass in making hot-beds.

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Tobacco Seed.—We refer those who have inquired for Tobacco Seed to the advertisement of J. Rapalje & Co., in this number.

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"Bromer's Manure."—R.T.P., Punxsutawny, Pa.—We know nothing of this "*prepared manure,*" and would advise no one to purchase such articles without the composition is certified to, so that a correct estimate may be made of its value.

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The Farmer—Wheat, Potatoes, Manures, and Fowls.—I have been a subscriber to the Farmer nearly a year, and have been delighted with the reading matter it contains. Before we took it, my wife had been a subscriber to a Ladies' Magazine at four times the price, but she now says she prefers the Farmer, as the most interesting and instructive. She is a lover of flowers and gardening, and, by-the-by, wishes you to take her name as a candidate for some of the choice flower seeds the coming season.

I have just now been perusing the last number of the Farmer by a cheerful fire, whilst the rain is fertilizing the parched ground without, and seeing that you notice letters of inquiry on different subjects relating to farming, gardening, horticulture, &c., I feel inclined to submit a few questions to you, which if you deem worthy of notice, of course I shall feel flattered.

I have, for the first time in my life, come in possession of a house and lot of my own. The lot contains four acres; the soil is rather light and has not been improved much; it is of a sandy, loamy nature, the stone in part flint, and a mixture of what is here called the soap stone and iron stone. Now, as I am rather inexperienced in farming or gardening, or anything of the kind, I would like to get some instruction through your paper. There is a thin clover sod on one-half of it, which I had intended to plow under for wheat, but being busy building, and the season extremely dry, I delayed till too late. My potato crop last season was small, though what I had were very good, being very dry and mealy. I think the soil is well adapted to potatoes, and I think I should prefer cultivating them, could I produce two or three hundred bushels to the acre, as you say may be done. I can have access to some ashes, some barnyard manure, and plenty of lime four miles distant, at 8½ cents per bushel.

I would like, if I knew how to conduct and manage a small henery, to have one if it did not interfere too much with my little field. Could you give me some information as to their probable profit, the cheapest convenient mode of constructing the arrangements, and the best common kind of layers. Can any kind of hens be made to lay all seasons—winter as well as summer? What is the best plan of managing to effect this?

But I presume I have now given you enough questions for once. I have given so many, believing that information may be given through your widely circulated paper, either by you, or some of your correspondents, which will be instructive and entertaining not only to me, but to many of your subscribers in Pennsylvania. Warren Stracy.—*Bart, Pa.*, 1851.

Potatoes are a better crop than wheat to grow by one who has but four acres of land, all told. Use a little lime and a *great* quantity of ashes per acre, well incorporated with the soil, if you would grow a large crop of tubers. If the land lacks organic matter, apply leaf mould from the woods. A little well rotted manure may be added to bring them up to a high state of productiveness.

You might keep a few fowls with profit, but large numbers of fowls cannot be kept together without great care. They become diseased and die. Fowls want plenty of room, and a chance at the fresh earth. Although many agricultural editors ridicule the large breeds, we have no hesitation in saying that the Shanghaes are the best layers in the country. They are yet costly, and probably cannot now be procured for less than $5 per pair, which is too much to pay except for a pair or two to breed from. They will be cheap in a year or two. It is not natural for any birds to lay during the whole year. Yet much can be done by keeping them in a very warm house, and feeding fresh meat and pounded oyster shells, or lime and bones. A box of ashes, or sand, is quite a luxury, and necessary to their cleanliness.

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Carts.—A correspondent says: "I am much pleased with the plan you offer, so far as I understand it, and wish to get up a cart from the drawing, but find myself at a loss to understand one or two important parts. You say the body sets flat on the axle, and the shafts are attached to the bottom of the body by bent iron plates. Now it appears from the drawing, that the shafts are attached at the extreme front part of the bottom, which I think cannot be the case. How far from the front end are the shafts attached? (1)—What is the shape of the bent irons by which they are fastened? (2) How high are the wheels, and what is the width of the tire? (3) James Gardner.—*Hollidaysburg, Pa.*

(1) The shafts are attached to the bottom, by bent iron plates, near the axle, and it tips on the bolts which connect the shafts and body there. The usual way is to have shafts and frame attached to the axle, the body to sit on bolsters to bring it level, and to tip on the axle.

(2) Flat, and of sufficient width to correspond with the timbers or wood work.

(3) As a general thing, four and a half feet is the proper height for wheels, and four inches width of tire for the land. It cannot all be made plain, without skeleton drawings, but any good waggon maker who understands the *principle* can adapt the parts to each other.

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Yellow Spots in Wheat.—I write for the purpose of obtaining information through the columns of your valuable paper, as to the cause of the appearance of yellow spots in wheat. These spots are not generally seen until the warm weather of spring, when all at once different parts of the field will begin to wear a yellow and sickly appearance, and become stunted in growth. Sometimes these spots are not observed at harvest. At other times the disease is nearly fatal. My own opinion is that it is caused by some insect, but what kind of one (if insect it is) is a question. It is not the work of the Hessian fly, neither is it caused by wire worms; nor is it owing to a poverty of the soil, for manuring does not prevent it; it is not owing to a lack of potash, for I observe that the wheat is affected where I burned a log heap before sowing. Any information on this subject would greatly oblige A Subscriber.—*Olney, N. Y.*

Many believe that the larvæ of the wheat fly (cecidomyia tritici, not Hessian fly,) are in seed wheat when sown, and that the development of the insect in the young plant in the spring, occasions the injury of which our correspondent speaks. Mr. W. P. Kinzer, an intelligent observer in Lancaster Co., Pa., says: "In May, young insects are easily discerned with the naked eye, (having grown from the nits deposited in the groove of the wheat grain,) lodged in the bulb of the plant between the radicles and culm, or plumule, in the pupæ state, which soon after forms chrysalis, after which, being now in a perfect state, the young fly by means of its ovi positor, escapes through the bulb of the plant, nearly even with the surface of the ground.—(See Albany Cultivator for October, 1836.)

German entomologists enumerate over a thousand insects that prey upon cereals, at the head of which is *tricum*, (wheat). We are by no means sure that Mr. KINZER is entirely correct in his observations. We have, too, hatched out a fly from a seed of wheat, November 8th; and we are not certain where the mature insects, so common in the wheat of Maryland and Virginia, spend their winters after their maturity.

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BONE DUST AND SUPERPHOSPHATE OF LIME.—Will you be pleased to inform me, and others interested, through your excellent paper, whether Bone Dust and Superphosphate of Lime are as valuable, as manure, for carrots as for turneps. JOHN W. BAILEY.—*Plattsburgh, N. Y.*

We have never used Superphosphate of Lime for carrots, but think it will be a very good auxiliary of farm-yard dung, sown broadcast at the time of sowing the seed. We intend using it this summer, and hope our friend will do the same and let us have the result. Leave a few rows undressed, by way of comparison, &c.

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THE GOPHER.—Your correspondent E. M. B., asks information relative to the habits of the "gopher." Could my young fruit trees and garden vegetables talk, they would tell him that its habits are bad enough. They do their mischief principally during the night, and always under ground, rendering it very difficult to capture them. Many persons call our prairie or ground squirrel by the name of gopher. The gopher always works under ground, while the prairie squirrel (which much resembles your eastern chipmunk) does its mischief upon the surface and in the daytime, and, compared with the former, are inoffensive. The gophers became so numerous and troublesome that I laid aside all business, and appropriated my services for a time to their especial benefit. Having selected a quantity of potatoes the size of a walnut, I put a little strychnine in each, filled my coat pockets, took my spade, and started the rounds, opening every fresh mound until I found their road or hole, into which I rolled a potato. The next morning, armed and equipped as before, I paid them another visit, and found that the holes had all been closed up. I again opened them, together with all new mounds, and as before introduced my poisoned potato. I perseveringly pursued this course for four or five days, since which I have not discovered a sign of one on my premises. This course has been pursued by a correspondent of the Prairie Farmer, with like success.

A few years since, I was much troubled by rabbits girdling my fruit trees. I cut thin pieces from the sides or base of scrub apples, sprinkled a little strychnine on the fresh side, and at night placed them in the places frequented by my troublesome visitors; and such was the unerring certainty with which it laid them out, that a neighboring nurseryman tried it, and gathered half a dozen rabbits at a time, the result of a single night's operation.

Could I have known of this earlier, it would have saved me many dollars and much perplexity; and if it will be of service to any of your numerous readers, use it. WM. L. LARNED.—*St. Anthony, Minnesota Territory.*

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GARGET IN COWS.—Will you please to inform CARLTON GRAVES, through the Genesee Farmer, that the garget or pokeweed root operates like a charm, and is all that can be desired as a remedy for the garget in cows, when in a mild form. I have given green root the size and length of a man's finger, mashed fine, as a dose several times. A piece of the root put in the dewlap will have the same effect if the case is not violent. I would recommend that he procure COLE's book on Diseases of Domestic Animals. S. B.—*Susq. Co., Pa.*

JOSEPH TICKNER, of Harmony, N. Y., gives the result of forty years' experience as follows:

I noticed, in your October number, a question from a brother farmer, desiring information in regard to the treatment of garget in cows. Being in possession of the necessary information, I feel bound to make it known for the benefit of your readers. During above forty years experience, in which time I have cured many of my own as well as my neighbour's cows, I have never known it to fail of curing in a single instance. The remedy is simply this: Take skokeweed and cut up your double-handful fine; mix with meal and feed you cow. One mess will generally effect a cure; if not, try a second, which I never knew to fail.

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TO PREVENT HOGS FROM ROOTING.—I was much amused in reading the inquiry in the January number of your paper headed "To prevent Hogs rooting," and was particularly amused by the manner suggested of performing the operation. In the first place, if H. JENNINGS had taken the trouble to have whittled a grunter's nose down, as he should have done, he would have found the tendons spoken of that support the end of the nose and are attached to the top of it. These diverge towards the eyes, near where the muscles are situated which give the power. These tendons are consequently several inches in length, and by severing them at any point between the muscle and end of the nose the object will be effected. The point of a pen-knife is the proper instrument to be used, and there is no necessity of cutting across the nose to accomplish this, as it would require quite a deep gash through the integuments of the nose before the tendons would be cut off by such means. J. H.—*Big Stream Point, Yates Co., N. Y.*

Pumpkins as Food for Stock.—I have often seen root crops recommended very highly for feeding to stock during winter, and I believe in using something of the kind; but it seems to me that the culture of roots must be somewhat tedious. Now, I would ask, cannot something which is more easily cultivated be substituted for roots? I think that pumpkins would answer the purpose, and that an equal quantity could be raised at much less cost. But do they contain as much nutriment in a given weight as the roots generally recommended? or how much are they inferior to Indian corn? Can they be saved through the winter? These are questions which I am unable to answer. It would be conferring a favor on me, and probably on many others, if you or some of your numerous correspondents would answer them through the Farmer, and tell us all about the proper soil, mode of culture, keeping, &c., &c. Marcus M. Moser.—*Flint Rock, Catawba Co., N. C.*

Bee Rot.—Last spring I purchased two swarms of bees, both large and healthy. The season being quite cold and wet, they cast off but one swarm. This fall I found the swarm which swarmed in the summer, to be badly affected with the "bee rot," a disease quite common in this section for a few years past. It appears that the young bees die while in the larva state, and the bees refuse to uncap the cells and rid themselves of the evil. Their decomposition soon causes an effluvia as poisonous to the parent hive as it is disagreeable to the smell. The cause can not lie in the dampness of the season, for we have had it for several seasons when very dry and warm; neither can it lie in the peculiar kind of honey gathered, for a few years since the disease was unknown. Will some of your readers interested in bee-culture state, in your columns, their opinion of the cause, and if possible, suggest a remedy. D. G. Fort. —*Apulia, N. Y.*

HORTICULTURAL.

(M. B. B., Fredricks, Del.) "Burning Strawberry Vines."—We do not practice nor approve of the operation.

Sea Kale.—Take a piece of good garden soil, trench eighteen inches to two feet deep, turning in about a couple of cart loads of manure and half a bushel of salt to the square rod; plant the roots in rows two feet apart, and about twelve to fifteen inches apart in the rows. Plants can be had at the nurseries at $1.00 or $2.00 per dozen, or may be grown from seed to be obtained at any of the seed stores. To be fit for use it must be *blanched*, either by covering the plants in spring, as it begins to grow, with suitable pots or with light sandy earth. It may also be forced by putting warm stable manure around it.

Rhubarb, or Pie Plant.—For this, trench the soil deep and manure heavily. Any good garden soil treated thus will be suitable. Plants should be set three feet apart each way. To be sure of having a certain variety, you must obtain *roots*, but very good sorts are sometimes produced from *seeds*. A great deal depends upon the treatment, *good deep soil and abundance of manure* being the chief requisites.

(L. B., Out West.) *Six best Summer Apples.*—Red Astracan, Early Harvest, Early Strawberry, Large Sweet Bough, Early Joe, and Summer Rose. *Six best Fall Apples*—Fall Pippin, Gravenstein, Pomme Royal, Jersey Sweet, Porter, and St. Lawrence. *Six best Winter Apples*—Baldwin, Swaar, Esopus Spitzenburg, Northern Spy, Talman Sweeting, and Rhode Island Greening.—*Scions* can be sent by mail, if the quantity be small, but express companies are now so numerous that you can procure them easily and safely through them. You will find nurserymen's advertisements in the Farmer. We cannot recommend any one in particular.

(W. B., Blenheim.) Peaches are rarely grafted and do not succeed well. They can be budded on the plum or almond as well as on the peach.

(A. W., Galesburg, Ill.) Half decayed saw dust is a valuable ingredient in manure, and especially stiff soils. We have seen plants growing well in it alone. We have no experience in the application of coal ashes to fruit trees in a *special* way. Has any of our readers? The art of *feeding* fruit trees to make them proof against blight, is unknown—a great subject for future investigations. We know, from experience, that a *dry and moderately fertile soil* is most conducive to their general well being.

(A Subscriber, Buffalo.) Your soil being an "old brick yard" will not be suitable for the peach, which requires a dry friable loam. The apple, pear, and plum, may do well on it, provided it be properly prepared by frequent plowings, and by turning in light substances, such as leaf-mold from the woods, swamp muck, saw-dust, if convenient, and stable manure; sand would also improve it, by increasing its porosity. For select varieties refer to a nurseryman's catalogue, or to back numbers of the Farmer.

(J. P., Fredonia.) The preparation of manure for hot-beds consists in turning it over repeatedly, in order that it may be uniformly decomposed and not *burnt*, as heaps generally are when left to themselves. After being turned several times, the first violent heat passes off and then decomposition going on gradually gives out a more temperate heat and it is fit for the bed.

(Ida, Haviland Hollow.) Petunias, Verbenas, Salvias, Heliotropes, Cupbeas, Lantanas, and Scarlet Pelargoniums, will answer your purpose—blooming all summer. Among hardy Climbing Roses, *Queen of the Prairies* and *Baltimore Belle* are two of the best. The new Phloxes are worthy your attention. *Six fine cheap Dahlias*—Queen of the East, Purple Standard, Striata Perfecta, Triomph de Magdeburg, Stern von Miedling, and Indispensable White—all distinct and good.

A Request to Fruit Growers!—Mr. A. Porter, Nettle Lake, Ohio, has an orchard of apple trees to graft and desires us to request fruit growers, who may have them to spare, to send him grafts of choice kinds. He believes there are many who will do it with pleasure, and we trust, having done our duty, he will not be disappointed.

(A. J. H., Newfane.) GRAFTING QUINCES ON THORNS.—It will do very well if the thorns be not too large, say about an inch in diameter, and graft near the ground. It would be better to graft where they stand and remove after one year's growth of graft.

(J. M. B., Adams, Jeff. Co., N. Y.) STOCKS FOR THE PEACH.—The best stock for the peach in your cold "Black River" country, will be the plum, and the native species that grows quite late is the best, working well after the peach buds are mature. Bud near the ground.

(F. W. L.) DWARF ORNAMENTAL TREES.—There are certain kinds of ornamental evergreen trees that may be kept of small size by shearing or pruning them annually. Such are the Arbor Vitæ, all the species and varieties; the Red Cedar; the Hemlock; and the White Cedar. The Norwegian Fir also bears shearing well and may be kept of small size where fancy or circumstances require it. The better way, however, is, in the case of ornamental trees, to select, for small places, species that do not attain large size—rather *shrubs* than trees. Dwarfing by the use of certain stocks, as in fruit trees, is not practised, and would probably be of little practical advantage.

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DWARF FRUIT TREES.—You have an excellent article in your last number, on the subject of Dwarf Fruit Trees, but as they are but little known in this section, and as we are ignorant of their comparative value, you will much oblige some of us who are about to plant trees next spring, by answering the following questions in your March number. What is the longevity of the pear upon quince? (1) What is about its maximum of fruit when full grown? (2) Which will produce the most fruit during the first ten years, the dwarf or the standard, supposing both of a kind? and which during the first fifteen years? (3) We are aware that a variety of circumstances would qualify the answers; but without supposing you can be exactly definite, we thought you would, from much experience and observation, be able to give such an answer as will settle the question of comparative value. C. W.—*Pleasantville.*

(1) There is so much depending upon circumstances that we can give no very definite answer. One variety under favorable circumstances might endure fifty years or more, whilst others might endure half that time. If varieties be selected that are well known to flourish on the quince, and they are planted on suitable soil, and be afterwards properly taken care of, they will, at any rate, endure an ordinary life time in a healthy and productive state.

(2) We know trees that are not yet full grown, and produce annually a barrel of fruit. But we think that few varieties would come up to this, quite.

(3) During the first ten or fifteen years, those on the quince will unquestionably yield the largest amount, because they will bear from the third year, whereas those on the pear will not commence bearing to any amount before the eighth or tenth year. It is after the fifteenth year, or we might say after the twentieth year, that standard pear trees on pear stocks yield large returns. For a solid, permanent, *investment* in pear culture, plant standard trees on pear stocks, but for immediate returns, say for the first ten or fifteen years, plant those on quince.

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CRANBERRY CULTURE.—I should like to inquire, through your paper, respecting the cultivation of the Cranberry plant—where they can be obtained; what soil is necessary for their growth; the probable expense of getting them; what time is best for transplanting; and how they are to be treated after they are transplanted? Your answer to the above questions will greatly oblige several of your subscribers. C. E. CLARK.—*Dansville, N. Y.*

The attempt to cultivate Cranberries on high land, we believe, has been a failure. They are natives of the swamps, and we think they will thrive only on mucky land. We have had no experience in their culture.

Fruit Scions for 1852.

THE subscriber will furnish Scions for this season's grafting, of the celebrated fruits of Western New York:

APPLE.

Northern Spy,
Norton's Melon,
Wagener,
St. Lawrence,
Canada Red,
Swaar,
Baldwin,
Pomme Grise,
Seek-no-further.
Hertfordshire Pearmain,
Fameuse,
Bourassa,
Twenty Ounce Apple,
Hawley, or Dowse,
Gravenstein,
Bailey Sweeting.
Ribstone Pippin,
Summer Rose,
Rambo,
Esopus Spitzenburgh,
Yellow Bellflower,
Roxbury Russett,
Early Harvest,
Early Strawberry,
Autumn Strawberry,
Early Joe,
Fall Pippin,
Holland Pippin,
Rhode Island Greening,
Talman Sweeting,
Green Sweeting,
Porter,

PEARS.

Virgalieu,
Seckel,
Swan's Orange, or Onondaga,
Bartlett,
Oswego Beurre,
Brown Beurre,
Osband's Summer;

and most of the Foreign varieties.

Apple Scions $1.00 per 100, and Pear Scions Three Shillings per dozen. They will be carefully packed and sent by Express or by Mail. A discount on apple scions will be made to nurserymen.

Early orders are requested, to insure a supply. Address me (post-paid) at Rochester, Monroe Co., New York.

JAMES H. WATTS.

N. B.—In all cases where it is possible, I will send samples of the "Northern Spy" apple. Reference can be made to Mr. VICK, of the "Farmer."

Rochester, Jan., 1852.

Rochester Commercial Nurseries.

BISSELL & HOOKER offer for sale, in large or small quantities, a large stock of Fruit Trees, which they believe are inferior to none in health, beauty, or accuracy—among which are Apple, Pear, Peach, and Cherry Standards; Dwarf Pears on imported Quince stocks; Grape Vines, native and foreign; Raspberries, Strawberries, Currants, Gooseberries—strong, imported plants, at low rates. Osage Orange hedge plants. Ornamental Trees, Evergreens, Roses, &c. Green-house and Bedding-out Plants, of superior quality. Double Dahlias, Calceolarias, &c.—all of which we are confident will give satisfaction.

A general Catalogue will be sent gratis to all post-paid applicants. [3-3t]

NEW AND FINE SHRUBS AND PLANTS.

ELLWANGER & BARRY, Proprietors of the Mount Hope Nurseries, Rochester, N. Y., solicit the attention of those interested in Ornamental Plants to their large stock of rare and beautiful Shrubs and Plants, among which are the following:

HARDY SHRUBS.

Deutzia Scabra, or Garland Deutzia, a fine white flowering shrub.

Forsythia Viridissima.

Ribes Gordoni—Gordon's Currant—yellow and crimson, very fine.

Spiræa Prunifolia flore pleno—small, double, white flowers in great profusion; fine dense habit.

Spiræa Lanceolata, or Reevesi, one of the finest of the genus.

Spiræa Chamædrifolia, Nicondertî, Lindleyana, Japonica, and twenty others.

Syringa (Philadelphus) *Pubescens, Zepherii, Cordata, Double, Columbiana*, and others, all fine.

Lonicera Ledibourî—a fine Californian shrub.

Tamarix, Africana, Germanica, Gallica, and *Lebanotica.*

Viburnum Lantanoides, a beautiful shrub.

Wiegela Rosea—the finest hardy shrub, lately introduced from China.

The above excellent things can be furnished in quantities, at low prices.

SELECT GREEN-HOUSE AND BEDDING PLANTS.

Fuchsias.—Our collection is one of the best in America. The most distinct and best varieties yet introduced and quite rare, such as *Pearl of England, Fair Rosamond, Serratifolia, Serratifolia multiflora, Fulgens Corymbiflora, Corymbiflora Alba, Magnificent, President, President Porcher, Spectabilis*, &c., are propagated largely.

Verbenas.—A collection of fifty varieties, comprising everything fine introduced to this time.

Heliotropes.—*Souvener de Liege, Corymbosum*, and some new varieties just received and to be announced hereafter.

Plumbago Larpentæ.

Cupheas.—*Platycentra, Stringulosa*, and others. The first is one of the finest bedding plants.

Lantanas.—*Ewingi*, the fine new Cincinnati variety, rose and straw color; *Mutabilis Major*, and several others.

Bouvardias.—*Triphylla*, and others.

Abutilons.

Salvias.—*Splendens Major, Oppositifolia, Azurea*, and others—superb plants for masses.

Fabiana Imbricata.

Hydrangeas.—*Hortensis, Japonica, Cordata, &c.*

Buddlea Lindleyana—a fine shrubby plant with large clusters of purplish lilac flowers; blooms in the autumn.

Habrothamnus Elegans—a superb plant, half shrubby, with large clusters of showy crimson flowers; blooms equally well in the open ground in autumn, and in the house in winter.

Petunias.—A large collection, embracing all distinct and good sorts.

Lobelia fulgens insignis, Lobelia fulgens alba—flowers of dazzling beauty—both new.

Veronica Lindleyana—a charming autumn flowering plant; long elegant spikes of pale (nearly white) blossoms. *Veronica Andersoni*—finest of all—*new.*

Tree Violets—white and purple.

Chrysanthemums.—A fine collection of the novel and beautiful pompone or dwarf varieties.

Dahlias.—A superb collection, including the English and French prize sorts of 1851—all at very low rates.

Cinerarias.—A fine collection of new and beautiful sorts, including *Magnificent, Attilla, David Copperfield, Wellington, Beauty of Newington, &c. &c.*

All the above articles furnished in large or small quantities, at low rates, and packed so as to go any distance with safety.

Priced Catalogues of Dahlias, &c. &c., ready 1st of March.

March 1, 1852.

Seneca Lake Highland Nurseries,

CATHARINE, CHEMUNG CO., N. Y., Near Havana Depot, N. Y. & E. R. Road. A complete assortment of Nursery articles, wholesale and retail. Great inducements to Eastern, Southern, and Western dealers. Packages amounting to $10 delivered at New York and Dunkirk, or any intermediate station on the Erie Railroad, free from charges to the purchaser. Price and Descriptive Catalogues furnished gratis, by mail. E. C. FROST.

March 1, 1852.—3-1t*

HIGHLAND NURSERIES, NEWBURGH, N.Y.

A. SAUL & CO. have the pleasure to announce to their patrons, and the public in general, that their stock of Fruit and Ornamental Trees, which they offer for sale the coming spring, is of the very best quality, and embraces everything in their line that can be procured in the trade.

Dealers and planters of trees on a large scale, will be treated with on as liberal terms as can be done by any establishment of *reputation* in the country. They flatter themselves that for correctness of nomenclature of fruits, (which is a serious consideration to planters) that their stock is as nearly perfect as it possibly can be, having been all propagated on their own grounds, from undoubted sources, under the personal supervision of Mr. Saul. They have propagated in large quantities all the leading standard varieties, which are proved to be best adapted for general cultivation, especially those recommended by the American Pomological Congress at its several sessions, as well as all novelties of recent introduction, and kinds particularly suited to certain localities, and sections of the Union and Canadas.

Their stock of Pear Trees is the largest they have ever had to offer for sale, and among the largest in the country, and consists of over 50,000 saleable trees.

The stock of Apple Trees is also very large, as well as Plums, Cherries, Apricots, Peaches, Quinces and Nectarines. Also, Grape Vines, Gooseberries, Currants, Raspberries, Strawberries, &c., &c.

Pears on Quince, Cherry on Mahaleb, and Apple on Paradise stocks, for pyramids and dwarfs for garden culture, and of which there is a choice assortment of the kinds which succeed best on those stocks.

DECIDUOUS AND EVERGREEN ORNAMENTAL TREES AND SHRUBS.

Embracing all the known kinds suitable for street planting, of *extra size;* also, the more rare and select, as well as all the well known kinds suitable for Arboretums, Lawn and Door-yard planting, &c., including Weeping Trees, Vines, Garden and Climbing Roses in great variety. Hybrid Perpetuals, Hybrid China, Hybrid Bourbons, Hybrid Damasks, Hybrid Provence, and Bourbon, Tea, China and Noisette, and Prairie, and other Climbing Roses.

A large quantity of Arbor Vitæ for Screens, Buckthorn, Osage Orange, and other hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere. For further particulars see catalogues, a new edition of which is just issued, and will be forwarded to all post-paid applicants by mail. A liberal discount will be made to purchasers who buy to sell again, and extensive planters on their own account.

P. S.—Freight paid to New York.

Newburgh, March 1, 1852. [3-2t]

Linnæan Garden and Nurseries, Flushing, N.Y.

WM. R. PRINCE & CO., in addition to their immense stock of Fruit and Ornamental Trees of the usual sizes, have 10,000 Pear Trees of bearing size, 5 to 8 years grafted on both Pear and Quince; and extra sized Cherries, Plums, Apricots, Apples, &c. The collection of Evergreen Trees is unequalled, and of every size from seedlings to fifteen feet high. All will be sold low in quantities.

Priced Catalogues sent to post-paid applicants enclosing stamps. Also, a Wholesale Catalogue for Nurseries.

Cedrus Deodora and Lebanon, Yews, Junipers, Pines, Spruces, Arbor Vitæ, &c., of large sizes. [3-1t*]

Fruit and Ornamental Trees.

ELLWANGER & BARRY beg to remind those who intend to plant next spring, that their stock of Standard Fruit Trees for orchards, Dwarf Fruit Trees for gardens, Ornamental Trees for streets, parks, gardens, and pleasure grounds, Shrubs, Roses, &c., is very large, and offers great inducements to those who desire first rate articles.

A complete Descriptive Catalogue is sent gratis to all who apply post-paid and send stamps for postage, which must now be pre-paid—5 cts. for 500 miles or under: 10 cts. over 500 miles and below 1000. A Wholesale Catalogue also furnished.

☞ See advertisement of Shrubs, &c., &c.

Mount Hope Nurseries, Rochester, N. Y., March 1, 1852.

Osage Orange for Hedges.

WE can furnish any number of fine yearling plants at $1.50 per 100, or $10 per 1000, or at $8 where 3000 or more are taken. Orders should be sent early. It takes about 33 plants to the rod, planted either in single rows at six inches apart, or in double rows a foot apart—either of which makes a good hedge. ELLWANGER & BARRY.

Rochester, N. Y., Jan., 1852.

GENEVA NURSERY,

CASTLE STREET, GENEVA, N. Y.

W. T. & E. SMITH, proprietors, invite the attention of Fruit Growers and Planters of Trees generally, to their large stock of well grown Trees, grafted and budded by the proprietors themselves, with great care. Geater inducements are offered here than at any other nursery. Our stock of Trees consists of 40,000 Apple Trees, well grown, with fine heads; 10,000 Pear, the best sorts; 12,000 Cherry, fine trees; 30,000 Peach, one and two years old; 1,000 Plum; 2,000 Isabella Grapes, one and two years; Apricots, Nectarines, Almonds, Dwarf Pears, Dwarf Apples, Dwarf Cherries, Raspberries, Strawberries, &c. &c. Ornamental Trees, Roses, Dahlias, Buckthorn, English Hawthorn, Scions for grafting, Seedlings, &c.—together with a general assortment usually found at other nurseries. [3-1t*]

Fruit Trees.

I AGAIN offer a large stock of Trees—about 100,000—of fine thrifty growth, composed in part of Apple, Pear, Peach, Cherry, &c.; together with an assortment of Green-House Plants suitable for bedding out—all of which are offered at extremely low prices.

Wholesale prices of Apple Trees will be from $9 to $10 per 100.

I would recommend to buyers, after examining other nurseries, to inspect mine before purchasing.

CHARLES POWIS.

Greece, Ridge Plank Road, N. Y., March 1, 1852.—3-3t.

State Agricultural Warehouse.

THE Subscriber would respectfully invite the attention of Farmers and planters to his varied assortment of Agricultural and Horticultural Implements, among which may be found Prouty & Mears' celebrated and highly approved Center Draught Plows; Emery & Co.'s Improved Railroad Horse Power and Thresher, all of which took the first premiums at the late State Agricultural Fair, and are unequalled by any now in use; together with the latest and most improved Plows, Straw Cutters, Fanning Mills, Corn Shellers, Seed Sowers, Cultivators, Harrows, &c., &c., which I will sell at as low rates as any similar establishment in the United States.

I shall at all times have on hand a full stock of Field and Garden Seeds, Guano, and all other fertilizers in the market, which may be had on the most reasonable terms.

Persons purchasing articles from me may rely upon their giving satisfaction, as I intend keeping only such as I can fully warrant.

A. LONGETT,
March, 1852.—3-1t. No. 25 Cliff street, New York.

Plows! Plows!!

WE are now getting in our spring supply of the celebrated Eagle Plows from Boston; also, the justly celebrated Curtis Plow, made by H. C. Curtis, Albion. These Plows stand unrivalled in this country, and are made expressly for use. They are made of superior timber, and the workmanship cannot be beat in this or any other country. All Plows sold by us are warranted to perform as recommended, or they may be returned and the money refunded.

J. RAPALJE & CO.,
Genesee Seed Store and Agricultural Warehouse, Rochester, N. Y.
March 1, 1852.

For Sale.

ONE of the best Devon Bulls in the State of New York, 4 years old this coming spring. Said Bull may be seen on my Farm, 3 miles west of Rochester, on the plank road in the town of Gates, Monroe county, N. Y. Pedigree, price, &c., may be obtained by personal application, or by letter addressed to the subscriber at the Rochester, P. O.

March 1, 1852. WILLIAM R. BOOTH.

Peruvian Guano.

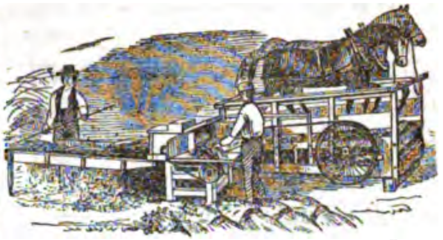
THE undersigned has received his supply of Guano, put up in bags of 160 lbs. each. The bags are branded "Genuine Peruvian Guano, No. 1, Imported by Theodore W. Riley, New York," which is warranted pure. For sale by

A. LONGETT,
[3-1t] 25 Cliff street, New York.

50,000 Osage Orange Plants,

ONE YEAR'S GROWTH, price $8 per 1000. No charge for packing or cartage, if 2000 or more are ordered.

OSAGE ORANGE SEED, at the lowest market price, wholesale or retail, as early in the winter as the new crop can be obtained from Texas. M. B. BATEHAM.
Columbus, Ohio. [1-2t]



ALBANY AGRICULTURAL WORKS.

Hamilton, Liberty and Union Sts.

THE subscribers are the originators and sole proprietors of the above works, which embrace a very large collection of labor-saving Machinery, not excelled in this country for facilitating the manufacturing of Agricultural Machinery to any desired extent, and with uniform accuracy and despatch.

WAREHOUSE AND SEED STORE,

869 AND 371 BROADWAY.

Our Warerooms are among the most spacious in the city, and collection of articles on hand large and new—most of the implements being of our own manufacture, and the Seeds grown for our own trade.

EMERY'S PATENT N. Y. STATE AG. SOCIETY'S FIRST PREMIUM RAILROAD HORSE POWER, AND OVERSHOT THRESHER AND SEPARATOR.

The above Horse Powers have been awarded the highest Premiums at the Fairs of the New York State Agricultural Society in 1850, and again in 1851; also, the highest Premium at the Michigan State Fair, at Detroit, in September, 1851, where a majority of the Committee owned and were using Wheeler's Powers on their farms, having purchased them previous to seeing our own; also a Gold Medal at the American Institute in 1851. It was also exhibited at the State Fairs of Ohio, Maryland, and Pennsylvania, and received the highest awards which could be given by the rules of their Societies. In every case, it has been in competition with all endless chain Powers of any note in this country—among which were Wheeler's Rack and Pinion. All of our Powers have the name, EMERY & CO., cast upon every link of the chain and hub of band-wheel. None others are genuine.

All the above are offered on liberal terms, at Wholesale or Retail, at the Albany Agricultural Warehouse and Seed Store, 869 and 371 Broadway, Albany, N. Y.

Catalogues gratis, on application.
March, 1852. EMERY & CO.

Cochin China and Shanghae Fowls for Sale.

THE subscriber has for sale a few pairs of his celebrated stock of *Cochin China* fowls, of his own importation, warranted true to their name and not excelled by any other stock in the country for good qualities. Also, a few pairs of of the Marsh Stock of *Shanghaes* and *Sumatra Game Fowls.* Reference given in regard to them, if desired.

EGGS FOR SETTING.

Eggs furnished from the above stock carefully packed for transportation, and orders for the same addressed to the subscriber will be promptly attended to. Price of Eggs $2 per dozen.

CHARLES SAMPSON,
[3-2t] West Roxbury, Mass.

Potato Onions.

FIFTY BUSHELS genuine English Potato Onions for seed, now in store and for sale, at $2.50 per bushel, at the Genesee Seed Store, 65 Buffalo st. Rochester, N. Y.

March 1, 1852. J. RAPALJE & CO.

Notice.

THE undersigned has disposed of his interest in the "State Agricultural Warehouse," No. 25 Cliff street, New York, to Mr. A. Longett, who will in future conduct the business on his own account.

GEO. H. BARR.
New York, Jan. 10, 1852.—3-1t.

50,000 Apple Stocks Wanted.

TEN TO FIFTY THOUSAND Seedling Apple Stocks, of thrifty *two years' growth*, are wanted and will be paid for in Cash. Apply, or send samples, with price, immediately, to

JAMES VICK, Jr.
January 1, 1852. Genesee Farmer Office.

Prices of Agricultural Products at the Principal Markets in the United States.—[illegible]

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Pittsburgh.	
Beef, per 100 lbs....	$4.50	a 6.00	$7.00	a 8.60	$4.00	a 4.75	$4.00	a 4.25				
do mess, per bbl..	8.50	11.50	10.00	12.50	11.00	11.50						
Pork, per 100 lbs....					6.00	6.25	4.00	4.12½				
do mess, per bbl.	14.00	15.37½	16.00	16.50	15.00	15.50	16.00	16.50	$14.00			
Lard, per lb.........	9	9½	9½	10	8	10	7½	8	6½ a	8		
Butter, do	16	25	16	20	12	16	8	10	8	15	$0.16	a 17
Cheese, do	6½	7½	6	8	6	6½	5	7	6½	7	6½	7
Flour, per bbl.......	4.87	6.00	4.75	6.00	4.25	4.75	3.00	4.00	3.37	3.55	2.75	3.12½
Wheat, per bush....	1.17	1.22			96	98	50	68	58	61	60	
Corn, shelled, per bu.	67	72	70	71	48	50	28	35½	25	30	39	45
Rye, do	76		74	75	69	70			48	50	46	48
Oats, do	40	45	40	45		31	17	20	22	28	37	
Barley, do	76	80	95	1.00	67	70			50	55	46	50
Clover seed, do	8a9½ pr. lb.		9 a 12 per lb.		4.75	5.25	12½ per lb.		5.30	5.50	5.37	5.50
Timothy seed, do	14.18 per tce.				2.00	2.50		2.25	1.25	2.50		
Flax seed, do	1.35	1.37½	1.50	1.60	1.25	1.50		1.00	1.00			
Hay, per ton........	17.00	18.00	13.00	15.00	8.00	12.00			8.00	13.00	13.00	16.00
Wool, per lb........	30	44	31	46	30	40	30	40	26	35		
Wood, hard, per cord			6.00	7.00	4.00	4.50	3.25	5.00				

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Union Agricultural Warehouse and Seed Store.

RALPH & CO., No. 23 Fulton Street, New York, near Fulton Market, Dealers in all the most approved Agricultural and Horticultural Implements; Imported and American Field and Garden Seeds; Ornamental Shade and Fruit Trees; Guano; Bone Dust; Poudrette, &c. Wrought Iron Plows, Trucks, Barrows, &c., &c, always on hand. Also, the Excelsior, or California Plow. [3-3t]

Tobacco Seed.

TWENTY POUNDS first quality Connecticut River and Virginia Long Leaf Tobacco Seed now on hand and for sale at the Genesee Seed Store. The Seed can be sent in ounce packages, by mail, to any part of the United States. Packages, $1.00 per ounce—4 oz. for $3.00 Postage paid.

J. RAPALJE & CO.
March 1, 1852. 65 Buffalo St., Rochester, N. Y.

A Farm Wanted.

A FARM of from 40 to 50 acres, with a good house and out buildings. It must be well adapted to Fruit culture. A letter, post-paid, giving a description of the proprty, and mentioning terms, addressed to SMITH, to the care of EVANS & Co, Southern Hotel, Buffalo, will receive an immediate answer. [3-1t]

To American Inventors and Purchasers of Patent Rights.

DEWITT C. LAWRENCE, late Chief Clerk of the U. S. Patent Office, having resigned for the purpose of resuming his profession in conection with the business of that office, tenders his services to American Inventors as Solicitor for Patent Rights. All the necessary papers and drawings prepared for obtaining Patents, and personal attendance given at the office on all business entrusted to his agency. Examinations made to determine the patentability of inventions, previous to incurring the expense of making application, upon a rough sketch and description being furnished accompanied by a remittance of $5.00.

Investigation made, and advice given, as to the validity of Patent Rights; and searches of the records in reference to title to territory conveyed, including the fee for recording an assignment, upon a like remittance of $5.00. Current Bank notes will be received at par, thus avoiding the risk incurred from the transmitting of specie by mail.

Refers to Hon. L. Cass, Hon. A. Felch, and the Members of the 31st Congress generally.

Washington City, D. C., March 1, 1852.

Cranberry Vines.

100,000 CRANBERRY PLANTS fine for transplanting, and can be packed and forwarded to any part of the Union. They are of the variety raised in New England, and abundant bearers. For sale by F. TROWBRIDGE,
[3-1t*] New Haven, Conn.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, JR., EDITORS.
P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

Five Copies for $2 — Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

Subscription money, if properly enclosed, may be sent (post-paid or free) at the risk of the Publisher. Address to

DANIEL LEE,
December, 1851. *Rochester, N. Y.*

POSTAGE ON THE GENESEE FARMER.—50 miles or under, five cents per year; exceeding 50 miles and not over 300, ten cents; exceeding 300 and not over 1000, fifteen cents; exceeding 1000 and not over 2000, twenty cents; exceeding 2000 and not over 4000, twenty-five cents; for any distance exceeding 4000, thirty cents.

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.

Vol. XIII. ROCHESTER, N. Y., APRIL, 1852. No. IV.

COWS AND CARROTS.

Mr. J. G. Hoyt, of Exeter, N. H., writes a letter of inquiry to the New England Farmer, asking information as to the value of carrots for milch cows, in which the opinions of several dairymen are cited to the effect that carrots do not sensibly increase the quantity of milk given, but they improve its quality and augment the per centage of butter. The editor of the Farmer quotes authorities whose statements are corroborative of the above.

It is a little remarkable that, after carrots have been extensively grown and fed to cows for thirty years, no one in New England appears to know the relation which 100 lbs. of this root and 100 lbs. of good hay, grass, or corn meal, bear to any given quantity of milk. If our friends there do understand the practical operations of milk-making, they will thank us for giving them an opportunity of informing us New Yorkers how many pounds of milk 100 of green clover, timothy, herds-grass, blue grass, orchard grass, or a mixture of any two, or of the whole of them, ought to yield in the system of "a good cow." We have visited Massachusetts twice in the last two years, and made particular inquiry on this point, as well as to the relation that 100 pounds of good hay, and a like weight of corn meal, bear to any given quantity of milk; but we failed to elicit any light beyond a luminous Yankee guess. Why New Englanders should be so opposed to experimental farming with a view to substitute facts for guesses, passes our comprehension, unless the constitutional desire to guess at everything be in truth the strongest element in the mind of the people.

When a cow eats 60 lbs. of grass a day for a week together, and gives 30 lbs. of milk a day at the same time, how much of the grass goes to form the milk? If any New England State, or New York, had established an experimental farm twenty years ago, or even ten years ago, no one would now have to ask so simple a question; nor would there be any doubt as to how much milk 100 lbs. of carrots will yield when fed with steeped cut corn-stalks — the way in which we have given them to dairy cows. We have bought carrots, hay, corn meal, shorts, brewers' grains, and still slops, for the production of milk to sell; and while we do not claim to have made what our friends might consider "scientific experiments," yet our experience is decidedly in favor of carrots. Accurate scientific experiments in rural economy can not be made without costing considerable money; and so long as a State in which eleven or twelve hundred thousand cows are milked, and which produces fifty million pounds of cheese and eighty-five million pounds of butter a year, is too poor or too rich to pay for any experiments designed to increase the yield of milk from any given amount of food, we feel no obligation to give either our time or money for its benefit in that behalf.

As there are 86 lbs. of water, and sometimes 87, in 100 lbs. of carrots, they should be fed with more solid feed to realize their highest virtues, whether eaten by horses, oxen, or cows. But men producing milk to sell rarely fail to feed liberally on slops of some kind, or roots that contain more water than green grass does, which is 75 per cent. We recently visited a pretty extensive dairy establishment near Washington, and found thirty thousand bushels of turneps well housed for feeding cows. In these turneps there is not less than 90 or 91 per cent. of pure water, and yet the milk from this dairy is said to be the best sold in the city. We have frequently heard it commended by intelligent gentlemen who know nothing of the way in which the milk is produced. Nearly all the hay is sold off this farm, and a large stock is kept on roots and cornstalks, shucks and blades. The farm is the property of Mr. CHARLES CALVERT, President of the Maryland State Agricultural Society, and contains about 2700 acres. It is grazed by some of the best Short Horns, Ayreshires, and Alderneys, in the country. Milk is sold at twenty-five cents a gallon by the quantity the year round.

From an extended observation and large correspondence, we have reason to believe that the culture of carrots and other roots for the feeding of cows and other stock, is on the increase; but it is an error to suppose that a pound of carrots is equal in value to a pound of oats for a horse or an ox. 100 lbs. of dry oats contain only 12 of water; whereas, 100 of carrots contain 86 pounds of water. One advantage in feeding carrots is, that the digestive organs separate all or nearly all of the elements of nutrition which they possess; while cattle and horses often void corn and oats whole, or only slightly digested, and in a way that the farmer loses much of the value of the grain consumed. This remark applies more to the Middle, Western, and Southern States, than to the farmers of New York and New England. The fault we find with the latter is, not that they decline to investigate the principles of good husbandry themselves, but for virtually instructing their representatives in State and National Legislatures to withhold all aid from such as desire to study agriculture as an honorable profession. Nobody knows anything beyond a guess about producing milk, meat, or wool, in the United States; not because there has been no young men of talent and industry to investigate these branches of husbandry in a critical and satisfactory manner, but because their desire to understand the laws of nature which establish the relations that rocks bear to soils, soils to plants, plants to animals, and animals to their fat, muscles, bones, milk, and wool, has been most cruelly crushed in the bud. A sneer at their "science" is simply adding insult to injury. There is such a thing as killing offspring when born and before; and this infanticide is inflicted upon rural science in its embryo state, or soon after.

We have just had the pleasure of an hour's conversation with Mr. ELIAS AYRES, an emigrant from Worcester county, Mass., to Loudon county, Va., where he has been engaged in the production of cheese for several years. He says that a given quantity of food fed to the native cows of the country, yields about half as much milk, cheese, or butter, as it would have done if consumed by such cows as are common in New England. Hogs require about a third more corn to make 100 pounds of pork in Virginia than in Massachusetts. We have in our possession many letters from practical farmers, which go to prove that some get three times more meat, wool, and dairy products from a given amount of grass, hay, grain, and roots, than others obtain. When we said that 100 lbs. of carrots *ought* to yield 50 lbs. of milk in good cows, we did not say that good cows as now kept *do* yield so much. The remark was made, as thousands of others have been, to provoke discussion, bring out the truth, and ultimately convince a majority of our readers that the time has come when the study of husbandry and tillage should commence in this nation of farmers.

Before any considerable quantity of milk can be separated from the blood of a cow, the first and paramount wants of her system, for the purposes of constant respiration, and to repair the waste of elements in bones, muscles, nerves, and other tissues, must be supplied from her daily food. The primary wants of nature being satisfied in a skillful manner, we may then proceed to separate milk from the blood in its passage from the extremeties of arteries into veins in the udder, or lacteal gland, to the best possible advantage. In some glands, two pounds of milk an hour, or forty-eight in twenty-four hours, have been secreted; and even considerably more than this result has been attained. Now, if we could have our way in educating the youth who are to keep cows, every one should have a clear idea of nature's plan of separating from arterial blood a quart of rich milk an hour. There is no hocus-pocus black art in this beautiful operation, and a child with half an eye may see it, if his dad will only let him. If it were not for the vinegar of prejudice, and the aqua fortis of ignorance, the laws of Providence which really govern the results of farm labor would be studied and obeyed with great success in this republic. All that we contend for is the sober, steady, and diligent investigation of the laws of God. If we mistake not, our highest duty and our highest interest alike demand that His laws be regarded as the basis of all agricultural principles. From no other point of view is it possible to see agriculture as it is; or rather, as it ought to be. Principles, to be worth anything, must be founded in nature, and nature is everywhere under the control of laws established by the Creator. A knowledge of these laws is science, and anything short has little claim to that appellation. Hitherto science has done very little for tillage and husbandry, simply because its principles are treated with general neglect and contempt.

Why should whey, which contains very little butter and no cheese, be a valuable addition to the feed of cows for the production of cheese, in dairies for that purpose? The large per centage of sugar in whey supports respiration, and thereby permits food that abounds in the elements of cheese to be appropriated to the formation of milk, instead of being consumed to keep the animal warm. Nature's process for making milk, and the adaptation of the raw material to her purposes, are matters to be well understood before one can expect to see the relation that 100 lbs. of carrots or grass bear to 50 lbs. of milk, under the most favorable circumstances.

◆

BEET-ROOT SUGAR.

Sugar is now not only a luxury, but a *necessary* of a civilized community—indispensable to the enjoyment and comfort of human life. Its sources are various and inexhaustible, being found in greater or less quantities in nearly every vegetable. It is divided by chemists into two kinds, *cane sugar* and *grape sugar*: the former being principally obtained from the cane, beet-root, maple and palm trees; and the latter existing in the grape and nearly all fruits. Cane sugar can be easily converted into grape sugar, but the inverse conversion has not yet been effected. Their composition is as follows:

	Cane Sugar.	*Grape Sugar.*
Carbon,	47.1	36.7
Hydrogen,	5.9	6.8
Oxygen,	47.0	56.5
	100.0	100.0

Cane sugar is readily obtained in a hard crystallized form, but grape sugar is crystallized with great difficulty, and is usually found in the form of molasses. Starch is convertible into grape sugar by the use of diluted sulphuric acid, and in the malting process the starch of the grain is converted into sugar by *diastase*. By the use of yeast, or other *nitrogenous*, *fermenting* substance, sugar, from whatever source obtained, is convertible into carbonic acid and alcohol, the intoxicating ingredient of all spirituous liquors, wine, beer, cider, &c., &c.

The cane contains about 18 per cent. of sugar, though by the present process of manufacturing it, little more than 7 per cent. is obtained. This is owing principally to the difficulty of expressing all the juice from the cane. Thus, while the cane contains 84 per cent. of juice, the average quantity secured by the manufacturer is but 50 per cent., and in some cases not more than 30 per cent. is obtained.

Beets have long been used in France for the manufacture of sugar; and though they were first grown and extensively used for this purpose during the continental system of embargo, when sugar was a dollar per pound, yet they are at the present time grown to a great extent in France with considerable profit, and sugar at eight cents per pound. They are also being grown in Ireland; but it is yet problematical as to whether they will pay there, the price of sugar being but six cents per pound and the climate being colder, not so well adapted for the formation of sugar in the beets. The composition of the beet, the mean of several analyses, is as follows:

Water,	87
Sugar,	8
Woody tissue,	5
	100

By the processes of manufacturing now adopted in France and Belgium, from 4 to 6 lbs. of fine, white, crystallized sugar is obtained from 100 lbs. of beets; and it is but reasonable to suppose that by further improvements in the machinery, and possibly in the cultivation of the beets themselves, *all* the sugar they contain will be obtained, and this quantity augmented by special manures and better cultivation.

The cultivation of the sugar beet is similar to that recommended in the March number, page 82, for mangel wurzel, though more plants should be left per acre, as the beets do not grow so large as the mangels. The rows may be twenty inches to two feet apart, and the plants singled out from eight to ten inches in the rows. The seed should be sown the latter part of May and first of June. The plants will be ripe about the last of August. Sixteen tons per acre is the average in France, though thirty tons are sometimes obtained on very rich land. We think twenty tons per acre might be usually obtained in this country by careful cultivation and judicious manuring. Taking five per cent. as the average amount of white sugar obtained by the common manufacturing process, a ton would give 100 lbs.; or an acre of beets of twenty tons, *one ton* of sugar. This, at six cents per pound, would be $120 per acre; and this besides the leaves of the plants and the residue of the bulbs, which are very valuable as food for cattle and hogs. The value of the beet-root in France is estimated at $3 per ton. The cost of raising a crop of beets in this country can not exceed $35 per acre, leaving, at this estimate, a a profit of $25 per acre for interest on land, &c. Of the cost of extracting the sugar from 20 tons of beet in this country, we can not speak very definitely; but where wood or coal is cheap, it appears more than probable that it could be done and leave a good round sum as profit for $60.

We think the matter well deserves the serious attention of our farmers; and are glad to learn from the many inquiries we have lately received respecting the culture of sugar beets, that they are alive to its importance. We would advise to small beginnings at first, so that the loss from any error in the manufacture, if any, would be small.

The process of reducing the beets to pulp and pressing out the juice, is very similar to that commonly adopted in the making of cider. When the juice is obtained, it is placed in a furnace and about 300 grains of pure lime added for every gallon of the liquor. It is then heated and kept as near the boiling point as possible without ebullition for about half an hour. This is for the purpose of freeing the liquor from impurities. The clear juice is then run off, passed through filters of animal charcoal, or burnt bones, and concentrated by evaporation till the sugar crystallizes. In France, about four hours are occupied from the time the beets are ground till the liquid is in the crystallizing pans, though this time is considered much too long and efforts are making to shorten it. It is necessary that great expedition should be used to prevent loss from fermentation, which proceeds with great rapidity in warm weather, and greatly reduces the amount of sugar. In the Patent Office Report for 1849 and '50, page 405, there is a most interesting article by Mons. MELSENS, detailing a series of experiments on the best means of checking fermentation of the pulp and juice during manufacture, from which it appears that bi-sulphite of lime added in small quantities prevents fermentation and removes any discoloring matter, which often injures the sale of beet sugar. By the aid of this discovery the pulp and juice can be kept for any length of time without injury, and the necessity for hurry is in a great measure removed. The cost of the bi-sulphite of lime must be little, as the materials, sulphur and lime, are everywhere abundant and cheap, and the mode of manufacture easy and simple.

The cultivation of the sugar beet, if it can be rendered profitable, will greatly increase the fertility of the farm, as nothing is exported from it but sugar, and all the nitrogen, alkalies, and phosphates, retained as food and manure. Super-phosphate of lime is a very valuable manure for this crop.

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UNDER-DRAINING.

THE reason for *under*-draining is found in these two facts: First, That water, however small in quantity, remaining stationary or stagnant about the roots of plants, is extremely injurious; experience demonstrating that no amount of manure will make a plant thrive while the roots are surrounded by stagnant water. Second, That water falling upon and *percolating through* the soil is not only not injurious, but greatly beneficial to vegetation, furnishing plants with elements which they need, and imparting strength and vigor of growth. On these two propositions the whole theory of draining hangs; and it is simply the most efficacious methods of removing the stagnant water, and rendering the soil as much like a *filter* as possible, that is matter of discussion. There is much diversity of opinion on this subject which we cannot discuss, but must give the methods generally adopted with the most success.

Stone drains were first used, then horse-shoe tiles, and now 1½-inch to 2-inch pipes pipes are found to be much the cheapest and best for draining purposes. In England this pipe, either round or flat-bottomed, is superceding all others. It was at first supposed that the water would not find its way into the pipes, but experience proves this to be incorrect, the joints affording sufficient avenues for this purpose.

In under-draining, the first thing is to provide an outlet for the water brought by the drains. This it will be always necessary to clean out to prevent obstruction, as a stoppage at the outlet or main drain renders the whole network of pipes useless. A fall of 1 in 700, with well laid pipe, passes off the water freely; but where there is plenty of fall, more should be given. The depth of drains and the distances apart will of course depend a great deal on the kind of soil and whether there are any springs as well as surface water to be removed; from two to five feet deep are the extremes, three feet being in general the best. The distance apart ranges from 16 to 100 feet on soils which need draining at all; and there are very few but what imperiously demand it.

The cost of draining depends a great deal on the price of pipes and on *the skill of the digger*. Drains can be cut, the pipes laid and covered up again, all complete, for twenty-five cents per rod. The price of tiles would vary according to facilities for making and obtaining them. Probably 1½-inch to 2-inch pipe would cost from six to eight dollars per thousand.

In cutting the drains, it is usual to throw out two furrows in opposite directions as deep as possible. It is then cleaned out about fourteen inches deep with a common spade; the next foot is thrown out with a narrower spade; and the remainder with a spade about six inches wide at the top, and gradually tapering so as to leave the bottom of the drain just wide enough for a man's foot. The loose soil at the bottom is cleaned out with a narrow scoop, the handle being sufficiently long and so shaped that a man can clean the drains from the top.

In laying the pipes, all that is necessary is to place them end to end as closely as possible. If convenient, it is best to put a piece of turf with the grass downwards over the pipes; though this may be dispensed with if the soil is moist and care is taken not to disturb the pipes in covering them with it. After the drains have been laid and covered a few days, the water comes through *as clear as crystal*, and there is little danger of stoppage from any deposit of sediment, and few if any of the fertilizing elements of the soil are washed out.

There has been much discussion between theoretical and practical men, as to whether the drains should be laid across the natural slope of the land or lengthwise of it, practical farmers for a long time adopting the former and the scientific farmers advocating the latter. There are few at the present time but what think the scientific men are right, and the drains are laid the same way as the land slopes and empty into a main drain, laid with larger tiles, *running across the fall.* This main drain discharges the water into an open ditch, which should always be kept clean, so that the water can run off freely.

The economy of under-draining at a cost of from $20 to $30 per acre, has been much questioned in this country where lands are so abundant and cheap; but all those who have given it a fair trial, have no doubt of its great benefit and of its paying great interest on the capital invested. They say the soil works much easier, is ready to plow much earlier in the spring, and *yields greatly increased crops* with less manure and less labor. We have no hesitation in asserting that there is but little land on which all agricultural crops would not be increased half as much again by thorough under-draining. It is a fact which, though it appears paradoxical, is nevertheless clearly established by experience, that land well under-drained is much dryer in wet weather, and much more moist in dry hot weather, than that undrained. We believe that the general adoption of thorough draining will do much to remove the innumerable insects, blights, and rusts, which now make such fearful devastation on our crops. An old English farmer informs us that he can remember when under-draining was scarcely known in England the crops were more liable to be injured by insects, &c., than they are here at present; but now they are unknown there, and the crops have doubled, which he thinks is owing more to under-draining than any other cause.

MILCH COWS, AND CALVES.

It is impossible to choose a subject of more general interest to the agricultural community, than Milch Cows; for though there is only a portion of American farmers that devote their farms principally to the dairy business, yet every homestead has its cows, and every farmer is interested in their management.

The best time for cows to "come in" is generally considered to be about the middle of April; though where calves are raised for the butcher, it will be profitable to have them earlier; as, being scarce, they sell much better. The period of calving is one of considerable danger, and much care is necessary to keep the cow in a healthy state, and in that condition which will make her most profitable the coming season. Cows of course should never be starved during the winter, but kept in a nice warm yard, having plenty of straw, cornstalks, or hay, regularly given them. If they are not milked, they may be kept in good condition on straw and cornstalks till within six weeks of calving, when they should have a little hay; and as the spring draws near, if not in good condition, a little corn meal, or what is much better, three or four pounds of crushed oil-cake a day, may be given for a week or so previous to calving. It is not, however, desirable to have the cow at all fat; but as it is often the case that owing to eating a large bulk of comparatively non-nutritious food the cow becomes costive, and inflammation to a greater or less extent ensues, it is advisable to give more *concentrated nutriment;* and oil-cake, besides being more nutritious than any other food given to cattle, is a slight aperient, and keeps the cow in a fine healthy state. It may be continued as long after calving as the farmer pleases—it will do no harm—nothing, in fact, producing more or richer milk. Whether it will *pay* to feed it, we are unable to say. Mangel wurzel being also laxative and very nutritious, are valuable food for cows at this period; and nothing will *pay* a farmer better than to grow a few acres every year for this especial purpose. Ruta baga are good, but are apt to give an unpleasant flavor to the butter. They are not so aperient as mangel wurzel. After the cow has calved, she should have some warm slops and be carefully attended. The first milk should be drawn out of the bag before the calf sucks; and afterwards, if the bag is hard, it is sometimes advisable to get as much of the milk as possible previous to letting the calf suck, so that he may knock on the udder, and well clean out all the milk.

When fatting for the butcher, the calves should always be placed in a dark place and be tied up, so that they can not run about. It is very necessary that they be often well cleaned out and littered with plenty of clean straw. This will keep the calves healthy, clean, and free from lice. In the celebrated cheese county of Cheshire, England, the calves are never suffered to suck the cows at all, but are fed with skim milk and boiled linseed or oil-cake meal, which they are taught to drink out of a pan or pail. We think this is an *unnatural* plan, and the benefits derived by it do not, or at least would not in this country, counter-balance the extra trouble. When designed for rearing, this plan may have its advantages; but the calf at first should undoubtedly be fed with the biestings or first milk, as, being the natural food, it is best adapted for the functions of the stomach and bowels. It is slightly purgative, and cleans out the black fœces which are in the calf when born. After the first week or two the fresh milk may be substituted by skim milk and boiled linseed or oil-cake, which should be given two or three months before the calf is weaned. Nothing pays better than to keep rearing calves *well* the first four months, giving them a good start in life. We would not advise the confinement of rearing calves; for, though it may conduce to laying on fat, the formation of muscles and bones and the general health of the animal is lessened.

Every one knows the great necessity there is of being gentle and kind to cows, so that they may be quiet and peaceful, and not stand trembling in durance vile while being milked. It is this that accounts for the opinion that a cow will give a dairy-*maid* more milk than she will to a man. We think a man, during the milking season, has seldom any business near a cow, his great, rough, hard hands, and still harder heart, rendering him unfit for a good milker; while a gentle, rosy dairymaid, with her kind words, soft hands, and "So, so, my good bossy," seated on a three legged stool, will fetch out the milk till the froth runs over the pail. Cows should be milked regularly the same hours every day, and should have access to water and shelter at all times.

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Willows.—There are $5,000,000 worth of willows imported into this country every year from Belgium and France, for making baskets, and for other purposes. They sell for $125 per ton, and the demand is greatly increasing, and is now much greater than the supply. They grow equally well in America as in Belgium, but need low, swampy land, that is fit for nothing else. They need no cultivation at all. In planting the first time, all that is necessary is to stick the cuttings into the soil in the spring. The next fall the first years' shoots should be cut down; and the next year they will come out thick and strong, and yield an abundant and most profitable crop. The common English willow, or osier, is the best variety for baskets.

LARGE CROP OF RUTA BAGA.

We have received a communication on the culture of ruta baga, from John T. Andrews, Esq., of West Cornwall, Conn., which we are sorry the limits of the *Farmer* will not allow us to publish. It is full of valuable information, and affords encouraging evidence of the successful application of skill and science to farm husbandry. Mr. Andrews says: "I devoted my head and hands to the work of agriculture with the full intention of convincing my neighbors that the idea that a collegiate education spoils a man for a farmer, is a popular error. I have succeeded so well that, though this is my second year at farming, I have taken first premiums this fall, at our County Fair and American Institute, on my cattle, sheep, poultry, turneps, potatoes, and ruta baga. I must add further, lest you should mistake me for a gentleman farmer, that the labor on my little farm is performed almost exclusively by my own hands. For much of the little I have learned of the art of farming, I am indebted to the *Genesee Farmer*, *Working Farmer*, and *Albany Cultivator*, of which I am a constant reader. *To these I owe my success.*"

The quantity of land cultivated with ruta baga was one-fourth of an acre. The soil was heavy and retentive of moisture, but safe from standing water by a gentle descent. It had been for many years a meadow, and yielded but half a ton of hay per acre. It was plowed, manured with twenty loads of manure per acre, and planted with potatoes, *which were a complete failure.* The next year it was plowed again twelve inches deep, and twenty more loads of manure applied per acre. After lying a few weeks, forty loads of manure per acre were spread over the surface and plowed in seven inches deep. It was afterwards plowed and dragged till the manure was thoroughly incorporated with the soil. Furrows were then drawn with the plow, twenty-seven inches apart, in which was spread a mixture of guano from the poultry yard, nightsoil, ashes, and gypsum. The furrows were then turned back over the manure, leaving the ridges twenty-seven inches between. Four or five seeds were then dropped on the ridges in holes about ten inches apart, and slightly covered with the garden rake. When the plants were sufficiently large to be clearly distinguished from the weeds, which were very numerous, the hoe was vigorously applied, destroying all the weeds and leaving one plant in a place. They were sown on the 20th of June and gathered on the 6th of November. The leaves were very large, of a dark green color, reaching from one ridge to the other, completely covering the ground. When gathered they were thrown into heaps of about 100 bushels each, and covered with straw and earth, to remain in the field until needed for use. The crop yielded, by actual admeasurement in a sealed bushel, 416½ bushels, or *one thousand six hundred and sixty-six bushels per acre.* This, at 50 lbs. per bushel, would be 41¼ tons of bulbs per acre, besides a large quantity of leaves, themselves valuable food for milch cows, &c. We speak advisedly when we pronounce 41¼ tons of bulbs per acre a larger crop than has ever been raised in Great Britain. 25 tons is there considered a first rate crop, and is seldom exceeded.

The quantity of manure which our friend applied appears excessive, and we hope, for the sake of agriculture, quite unnecessary. Twenty loads of good manure to the acre is a heavy manuring for ruta baga, and if to this is added 300 lbs. of super-phosphate of lime, sown with the seed, a good and profitable crop will be obtained. Ruta baga possess great power of drawing their nitrogen from the atmosphere, if supplied with available phosphates and carbon; but if large quantities of nitrogen are supplied in the manure, which was the case in the above experiment, this is employed in the organism of the plant, and its nitrogen-collecting powers are useless.

We hope to hear again from our friend, and trust he will continue to unite science with practice, be as successful in his experiments as in the one just detailed, and, successful or unsuccessful, give his results to the readers of the *Genesee Farmer.*

Condensed Correspondence.

During the last few months we have received a vast amount of useful information from many valued correspondents, which has necessarily been crowded out of our columns. We hope our friends will still continue to write and give us information, which in one form or another will find its way to the readers of the *Farmer*. Especially do we like to hear from practical, keen, observing, thinking farmers. It is by uniting facts furnished by such men and the indications of science, that a true system of agriculture will be formed. We give extracts from the communications that have accumulated on our hands, and shall try to give the greatest amount of information in the fewest possible words.

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Butter-Making Experiments.—The experiments on butter-making, detailed in your February number, were made in *cool November*. Mrs. B. is quite certain the result would be different and in favor of the small pans of milk, if the same experiments were to be made in *hot weather*. I hope L. N. will make further trials next summer. R. B.—*Fort Covington, N. Y.*

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Thick and Thin Sowing.—Some of my neighbors think that wheat, whether sown thick or thin, will grow about so thick. So last fall I selected three lands as near equal as I could find in the field: the first I sowed at the rate of one and a half bushels to the acre, (my common guage); the second, three bushels; and the third, three pecks. At harvest, that sown with one and a half bushels was the best; the three bushels was too thick and the heads small; and the three pecks to the acre was too thin, *rusted and shrunk*. Alpheus Calvert.—*Reading Center, N. Y.*

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To Clean Spring Wheat from Chess, Oats, &c.—I observed an article in the December number of the *Farmer* about washing spring wheat, to free it from oats and foul seeds. I send you another method, which I think is much better, as I have tried both. Take the fanning-mill with the chess-board placed so far up in the shoe that by turning fast the good wheat will drop in the mill, and the oats, poor wheat, and other light materials, will blow away, leaving the wheat cleaner than if it had been in water. This method is one of the best for cleaning chess, &c., from winter wheat for sowing. Seneca Lake.—*Romulus, N. Y.*

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Planting Small Potatoes.—I have noticed of late, that the more manure you put on the ground for potatoes, the smaller is your crop; and it is a well known fact, that the largest and best potatoes in the hill are the first to decay. In 1850 I planted half an acre of green sward, plowed in the spring, without any manure, and from necessity used the smallest potatoes I had for seed. I hoed them but once, and gave them a sprinkling of plaster after hoeing. The result was, I obtained from the half acre sixty-five bushels; and at the time of digging (the middle of October) there was not one peck of decayed potatoes among them. Last year I adopted the same course with similar results.

This year I propose to plant, for experiment, in an open woodland and cover with forest leaves, and will apprise you of the result, feeling that whatever interests the mass of farmers as much as this subject, should be looked to and as much light thrown on the subject as possible. A Subscriber.—*De Lancey, N. Y.*

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Home-made Guano.—I see by different agricultural publications the anxiety many farmers have of enriching their soil by lime, gypsum, guano, &c., at considerable expense, and at the same time suffering a large amount of the best fertilizing ingredients to be thrown to waste, which would cost them nothing to preserve. In the fall and spring I cart many loads of any kind of soil I can procure free from stone to a heap near my kitchen and wash-house door. I put it up like a coal pit—large at the base and small at the top. The top I make concave, so as to contain half a barrel of water. To this top I place a plank to which slats are nailed to walk up on, and I have all the dish water, soap suds, chamber-lie, meat and fish pickle, and every kind of refuse from in and about the house, carried to this heap. I frequently add a little plaster. After it has been there six months, mix it well, haul it out, and supply its place with another heap. It is a cheap manure, and far exceeds lime, gypsum, or guano; all of which I have used to a large extent. S. John.—*Mount Comfort, Pa.*

Merino, South-Down, and Leicester Sheep.—I keep three kinds of sheep, Merino, South-Down, and Leicester. Some time ago I sold part of the flock for mutton. The Merinos brought me $1.50; the South-Downs, $2; and the Leicesters, from $2.50 to $3. The butcher would always pick out the Leicesters, and I found it impossible to sell the others while they remained in the flock. I drew them out and disowned them, and thus was enabled to dispose of the others. The South-Downs were fair, profitable sheep—about the medium in Western New York. I can recommend the Leicesters; not because I have them to sell, but for the reason that they are more healthy, look better, shear more wool, grow faster, and pay better. The lambs sell for a higher price and much earlier than the other breeds, in Western New York. A Young Dutch Subscriber.—*Royalton, N. Y.*

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Soaking Corn in a Solution of Hartshorn.—A few years since, hearing a neighbor speak of the great value of soaking seed corn in a solution of hartshorn previous to planting, I was induced to try it, and have met with perfect success. I put two ounces of the hartshorn, costing twenty-five cents, to a peck of corn, cover the corn with water and let it stand six hours, planting as soon as possible, rolling it in plaster as I plant.

Two years ago we had a dry time just as our corn was nicely up, and all corn fields in this region looked yellow and sickly, while my corn planted as above kept of a dark green color and grew well till harvest, when I had 100 bushels of corn per acre, which we consider a good crop here. My neighbor who planted in an adjoining field, on much better land and well manured, but who did not use the hartshorn, had a very poor crop. I induced a neighbor to use it last year, and he obtained equally beneficial results. Warren Eka.

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Experiment with Poultry.—I have been keeping an account with my poultry the past year, to ascertain whether any profit could be derived from them. I commenced on the 1st of January, 1851, with twenty-three hens and two ducks. The hens were of the *Poland* variety, but not full blooded, and were mostly two years old. They were not confined, except a few weeks in spring and summer. I allow them two quarts of corn per day, except through the last of summer and first fall months, when they require less. The hens commenced laying about the middle of January and laid till November. The account from January 1, 1851, to January 1, 1852, is as follows:

Dr.		*Cr.*	
To 19 bushels 3 pecks corn,	$15 59	By 2685 eggs, worth, at market prices,	$32 02
" 111 eggs used for sitting,	1 36	" 25 chickens raised.	5 31
" Indian meal for chickens,	1 64		
	$18 59		$37 33
		Balance in favor of poultry,	$18 74

I commenced killing off my hens in July, and when they ceased laying in November I had but eleven. It would be fair to set down the average number for the year at eighteen. The two ducks layed 142 eggs, which leaves for the eighteen hens 2543 eggs, or an average of 141 eggs each, besides raising chickens. S. B. Smith.—*Saugerties, N. Y.*

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Guano on Corn.—Reading in the *Farmer* of the value of guano as a fertilizer, I ordered half a ton from Philadelphia. When it arrived, I turned to the *Farmer* for information how to prepare and apply it, but could find no directions there I then applied to the merchants who sold it; but they were ignorant on the subject. Here, then, was a dilemma: the time for planting had arrived, the guano was on hand; but how to apply it, was the perplexing query. I had learned it was necessary to pass it through a seive. I got a No. 6 and went to work, but soon gave it up, the odor and dust being exceedingly disagreeable. I had prepared my seed for planting, all of which was of a kind known here as the *Red Cob*, except a single ear of *Oregon*, which I had procured from Philadelphia, and for which the farmers in that vicinity paid $1.50 per bushel. This seed I planted first, and being desirous of making the best of it, gave it about half an ounce to the hill of the sifted guano previous to covering. The rest of the field of twelve acres was planted without the application of any manure at all. This came up in about six days; but my Oregon, which I expected to appear first, showed no symptoms of breaking ground. I waited ten days, and then commenced making search for the hidden treasure, which on finding appeared to be in a state which I can only describe as between a fry and a stew. Some of it eventually came up, made large stalks, and ears not one of which matured. Thus I lost my seed, labor, and guano. When the corn on the remainder of the field was up about six inches, I applied a mixture of equal parts of guano and coal ashes, about one-third of a gill to a hill. The soil was poor and had never yielded fair corn crops before; yet I obtained 800 bushels of very superior corn, with scarcely a soft ear to a wagon load. Last year (1851) I dressed twenty acres in the same way, at the same rate, and had as the result 1300 bushels of ears—a larger quantity than has been raised on the farm for the last twenty years in all.

I am not sure that the manner I adopted of applying the guano is the best. It is evident from the experiment made with the *Oregon*, that its immediate application to the seed is injurious, though applied in smaller quantities it might not prove so. On vines, (cucumbers, squashes, melons, &c.,) applied near the stem in the hill, the effect was astonishing. A SUBSCRIBER.—*Bear's Gap, Pa.*

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BEES.—The greatest difficulty I have with bees, is their robbing each other. To prevent it I have tried several experiments, but have failed in all except this: If hive A attacks hive B, change them—put A in the place of B, and B in the place of A; and if three or four should be in the fuss, change them all in the same way. By this means I have never failed to stop them in less than half an hour.

In regard to the moth I have but little trouble. I take corn meal and make a paste with strong salt water, spread it just the bigness of the hive half an inch thick, and place the hive square on the dough, making it all tight except the entrance, and this the bees will guard against the miller, which lays her eggs under the edge of the hive; and with this preventive I have no trouble with the moth. The hive should not remain in this condition after it is filled by the bees, but should be raised on blocks one inch thick. This gives the bees fresh air, and prevents the comb from melting down, which frequently happens in extreme hot weather. In this way they will also stand the winter better than if set close down, when their breath forms a frost which melts and runs down the hive, freezing when it strikes the board at the bottom. In this way I have lost several good swarms, with thirty to forty pounds of honey in the hive. IRA YOUNG.—*Conquest, N. Y.*

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CULTURE OF TOBACCO.—We have received an excellent article on this subject, from Mr. H. N. HOWE, Marcellus, N. Y., from which we give such facts as throw additional light on the subject:

Having prepared the beds, sow the seed (a table-spoonful to thirty square yards) if possible just before rain on a *still day*, or you may find the plants in some other place. Keep the beds free from weeds. It will answer to sow the seed from March till the first week in May. Any land that is natural for corn is good for tobacco. To ensure a large crop of either, any man knows that the ground must be well prepared and manured before planting. Mark the ground from three to three and a half feet one way and two and a half to three feet the other: this is for Connecticut Seed Leaf; the small kinds will bear to be thicker. Some think the plants should be three to four inches high before setting; but this I think a mistake. I commence setting when the plants are no larger than a fifty cent piece, and I invariably have good luck with my early set plants. A plant five inches high before setting will generally die to the ground; whereas a small one, if well set, will scarcely mind the removal. It will do to set in missing plants till the first week in July. The cultivator may be used as long as it will pass without breaking the leaves. The plants require no hill: they should be hoed two or three times; the first as early as practicable. When the plants show the buds fairly, they can be pinched off, leaving from sixteen to twenty leaves on a stalk; late plants must be topped lower. After topping, the suckers must be kept off; the cleaner the better for the growth of the plant, and the convenience of handling when stripping. When the leaves become spotted with yellow, the plant is fit to cut. It is best to have the dew off before cutting; and after rain the plants should not be cut for a few days, as the rain washes the gum from the leaves. When cut, the plants must be laid carefully on the ground to wilt. If the sun is hot, care must be taken or the plants will burn, and the places burnt are spoiled. In hanging, fasten the twine around the butt end of the first plant, fetch it across the pole, give it a turn round the next plant, and so on to the other end of the pole. The poles, or whatever is used to hang them on, ought to be sufficiently large to prevent the plants from pressing each other too much, as in such a case they are apt to spoil before they get sufficiently wilted to hang independently of each other. When the leaves are all cured and the middle stem of the leaf has become dry, and there come a few damp days, the plants will be moist and can be taken down without breaking the leaves. They should be laid in piles of two tiers, the tops together. After lying a few days it can (if the weather is not too dry) be stripped and done up in hands and packed away till ready to be boxed. Sweating can be done before or after stripping. If done before, it must be closely watched or it will become too hot and damage. Care should be taken in every operation to not break the leaves. The crop ranges from ten to twenty hundreds per acre.

AGRICULTURAL PRODUCTIONS, AS SHOWN BY THE CENSUS OF 1850.

State.	Acres of land improved.	Value of farming implements and machinery.	Value of live stock.	Wheat, bushels of.	Indian Corn, bushels of.	Tobacco, pounds of.	Ginned Cotton, bales of 400 pounds each.	Wool, pounds of.	Wine, gallons of.	Butter, pounds of.	Cheese, pounds of.	Hay, tons of.	Hemp, dew-rotted, tons of.	Hemp, water-rotted, tons of.	Flaxseed, bushels of.	Maple sugar, pounds of.	Cane sugar, hhds. of 1,000 pounds.	Value of homemade manufactures.
Maine	2,019,598	$2,363,517	$9,881,488	367,980	1,741,715	..	..	1,366,866	806	8,488,234	2,201,105	794,780	..	..	362	87,541	..	$510,998
N. Hamps're	2,251,388	2,314,125	8,871,901	185,658	1,573,670	50	..	1,108,476	85	6,977,056	3,196,563	598,854	..	..	94	1,292,429	..	393,455
Vermont ...	2,322,923	2,774,959	11,292,748	493,666	1,625,776	..	..	3,492,087	140	12,128,095	6,755,006	763,579	..	..	307	5,159,641	..	261,589
Massachu'tts	2,127,924	3,178,809	9,619,964	29,784	2,826,167	119,306	..	576,736	4,122	7,825,337	7,124,461	645,749	5	..	72	768,596	..	210,076
R. Island...	337,672	473,385	1,466,636	39	516,133	..	..	111,987	842	1,066,625	296,748	73,353	..	..	..	..	..	26,098
Connecticut.	1,734,277	2,043,026	7,358,996	40,167	1,996,462	1,383,932	..	512,529	3,346	6,620,579	4,512,019	499,706	..	..	9,775	87,781	..	188,995
New York..	12,285,077	22,217,563	74,672,356	13,073,357	17,844,808	70,222	..	10,021,507	6,483	82,043,823	49,785,905	3,714,734	81	20	53,824	10,310,764	..	1,277,170
New Jersey.	1,770,337	4,267,124	10,678,264	1,508,216	8,605,396	..	..	375,932	517	9,070,710	500,819	429,119	..	..	12,353	5,886	..	110,350
Pennsylv'nia	8,619,631	14,931,993	42,146,711	15,482,191	19,707,702	857,619	..	4,784,367	23,839	40,554,741	2,395,279	1,826,265	173	686	43,627	2,218,644	..	755,104
Delaware...	524,364	471,385	1,718,386	466,784	2,888,896	..	..	52,887	85	1,034,867	3,187	30,159	..	16	838	..	..	82,809
Maryland...	2,797,905	2,463,443	7,997,634	4,494,680	11,104,631	21,199,281	..	477,438	2,099	4,206,160	3,925	145,070	68	..	2,816	47,740	..	111,828
Dis. Columb.	17,083	40,220	71,573	17,370	65,280	15,000	..	..	863	14,869	..	1,974	..	..	..	..	..	75
Virginia.....	10,150,106	7,021,658	33,607,962	14,516,950	35,538,582	56,516,492	2,767	2,850,909	4,280	11,126,795	434,850	370,177	3,450	1,149	53,333	1,223,905	..	2,156,073
N. Carolina.	5,443,137	4,056,006	17,837,108	2,147,899	28,286,999	12,058,147	98,028	915,289	10,801	4,144,258	95,043	145,180	13	478	38,183	27,448	½	2,008,884
S. Carolina..	4,074,855	4,143,709	15,060,015	1,066,278	16,272,308	73,235	300,901	487,243	8,680	2,979,975	4,810	25,427	..	..	11	200	150	909,546
Georgia.....	6,323,426	5,901,050	25,727,408	1,085,784	30,428,540	420,123	494,023	988,802	664	4,640,074	46,391	23,427	..	..	585	50	1,278	1,838,093
Florida	349,423	675,885	2,945,668	1,225	1,998,462	982,584	45,078	23,235	10	375,853	18,324	2,620	..	..	..	..	47,411	74,362
Alabama....	4,387,088	5,066,814	31,558,686	292,429	28,485,966	163,605	560,360	637,829	14	3,961,592	30,423	31,801	..	70	54	473	28	1,890,258
Mississippi..	3,489,640	5,759,738	19,308,593	215,181	21,836,154	48,349	494,774	556,057	301	4,388,112	20,314	12,517	2	..	21	110	278	1,165,195
Louisiana ..	1,567,998	11,326,310	10,983,508	84	10,915,051	23,922	163,034	105,393	..	685,136	1,148	20,672	..	..	..	260	262,486	138,773
Texas	625,913	2,095,308	10,263,086	42,448	5,796,735	60,770	55,945	122,118	94	2,319,574	92,018	8,327	..	..	16	..	7,017	265,526
Arkansas ...	780,333	1,594,941	6,728,254	193,902	8,857,236	224,164	64,987	181,427	10	1,854,104	28,440	3,924	..	145	695	8,825	..	644,928
Tennessee ..	5,087,057	5,351,178	29,134,193	1,638,470	52,137,868	20,144,380	192,635	1,340,833	204	8,130,686	179,577	72,942	405	535	19,405	159,647	..	3,168,116
Kentucky ..	6,068,633	5,888,092	29,898,386	2,184,763	58,922,788	55,765,259	1,669	2,246,168	4,202	10,115,267	228,744	115,296	37,168	2,685	80,458	388,525	..	2,487,493
Ohio	9,730,650	12,716,153	48,276,187	14,967,956	59,788,750	10,480,967	..	10,089,607	44,834	34,180,458	21,350,478	1,360,636	628	464	185,598	4,521,643	..	1,696,601
Michigan ...	1,923,582	2,764,171	8,005,429	4,918,706	5,620,215	2,225	..	2,047,364	1,443	7,043,794	1,012,551	394,717	40	14	1,186	2,423,897	..	354,986
Indiana	5,019,822	6,748,722	22,398,965	6,625,474	52,887,564	1,035,146	5	2,502,763	13,004	12,748,186	666,986	402,791	794	775	35,803	2,921,638	..	1,647,200
Illinois	5,114,041	6,349,826	24,817,954	9,433,965	57,179,283	844,129	8	2,129,139	2,343	12,605,554	1,283,758	586,011	1,099	1,828	11,878	246,078	..	1,218,211
Missouri	2,911,422	3,977,449	19,764,672	2,948,840	35,709,042	17,038,364	..	1,635,182	10,193	7,762,124	201,597	116,284	17,061	4,014	13,489	171,943	..	1,662,749
Iowa	814,173	1,202,978	3,602,769	1,442,074	8,475,027	2,012	..	363,398	420	1,933,128	198,444	84,598	1,200	80	2,182	70,680	..	202,533
Wisconsin ..	1,011,308	1,701,047	4,594,717	4,292,208	1,988,878	768	..	243,065	68	888,816	440,961	295,927	..	100	884	661,969	..	57,506
California...	34,312	88,598	3,456,725	98,282	90,082	1,000	..	4,800	..	705	150	2,038	..	..	..	..	..	2,500
Minnesota ..	5,035	15,981	103,859	3,422	16,665	..	..	260	..	1,100	..	2,069	..	..	..	2,950	..	..
Oregon	135,357	183,403	1,875,989	228,882	2,928	325	..	29,596	..	211,734	36,080	373	..	..	..	..	..	..
Utah	15,219	78,495	533,951	103,441	9,144	..	..	8,897	..	74,064	32,646	4,288	..	..	5	..	..	1,304
New Mexico	161,296	78,217	1,504,497	196,575	355,795	1,118	..	32,641	2,053	101	5,887	..	..	..	..	..	..	6,081
Total.....	112,042,000	151,820,273	552,705,238	104,799,230	591,586,053	199,532,494	2,474,214	52,422,797	141,295	312,202,286	103,184,585	13,605,384	62,182	13,059	567,749	32,759,263	318,644	27,525,545

CULTURE OF THE GRAPE, AND WINE-MAKING.

BY L., OF IRONDEQUOIT, N. Y.

You gave in the January number of the *Farmer* much information on the science of grape cultivation and the making of wine. For the purpose of making good wine, and that which will mature itself in due time, it is of much importance to procure the right kind of grape, well adapted to the climate. Without detail on the selection and cultivation of a suitable wine-grape, suffice it to say that your correspondent, Mr. Blakely, of Roxbury, Conn., in his excellent article on "Wine-Making," has set forth very fully, and with much practical knowledge, the selection and propagation of the grape for wine-making. I would by no means depreciate the utility of the different modes of propagation proposed by Mr. Blakely, for they are among the best means of obtaining vines on a limited scale; but as no allusion was made to any other practice, in his communication, I beg leave to state that by far the most rapid and cheap way to multiply grape vines is by cuttings of the last year's growth; and it is the principal mode practiced by nurserymen in obtaining vines for their extended sales. Indeed, I suppose there may be 3000 cuttings, with three joints each, placed on a quarter of an acre; and if the soil be deeply worked, with good after culture, they will give more than half their number of well rooted vines, suitable for resetting after two years' growth.

Your paper is too valuable for me to occupy its pages with a long article, but I will venture to give a short statement of what we make wine of in Irondequoit, and how it is made.

The *Clinton* grape, as known in these parts, I consider the best adapted to making a high colored wine. This grape has rather a small berry, but is very hardy, and always matures itself in good season. I have a few barrels of wine made from vintage 1847 and '49, which prove to be of the very best quality with which I am acquainted. The greater proportion of this wine was made from the *Isabella* grape, combined with the *Clinton*. I may also state that it is selling as a choice article for sacramental purposes at two dollars per gallon.

When the grapes are fully ripe, and have been removed from the vineyard to the place assigned for making the wine, they should be assorted and all the decayed and green ones removed; then put them into a barrel, about a bushel at a time, stems and grapes, and pound them thoroughly till all the grapes are mashed. Continue the process till all is finished that you wish to make up at that time. The next process is to press out the juice or must, and to every gallon add two pounds of sugar, and stir it thoroughly till the sugar is all dissolved. After treatment is, to put it into barrels for the purpose of fermentation, there to remain, with frequent filling up to supply the waste, till the pomace is all fermented off. A supply of the must should be on hand for that purpose. The barrels should not be bunged up until the fermenting process is about complete, and by placing your ear to the bung it may be easily decided. If in April or May the wine should be found clear, it may be racked off; but if unsettled, it should remain till fall. If the wine is found to be just what you want it at the time of racking, bottle as much as you choose; but if not, let it remain on the lees, and the article will increase in character and strength.

The above mode of making wine I have practiced many years on a small scale; but for a more extended business in wine-making, the Ohio practice would be more complete.

I would remark that no grapes raised in this part of the State contain sufficient sugar or saccharine matter to make good wine without the addition of sugar.

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EXPERIMENT WITH POTATOES.

BY E. HAMMOND, OF MANORKILL, SCHOHARIE CO., N. Y.

I AM trying to pursue the "most healthy and honorable—the most natural pursuit of man." I reside on that high and elevated tract of mountain land on the western slope of the Catskill range, on the eastern sources of the Schohariekill, one of which passes through my farm. The soil is a dark clay loam. The stones are red, dark grey, and light grey—flat and broken. I have been a constant subscriber to some agricultural journal for the last seven years. I desire to know why a crop is sometimes first rate and sometimes almost a failure. I desire to move with some certainty in my pursuit.

In the April number of the *Genesee Farmer* for 1851 I read an excellent article on that almost worn out topic, the "Potato Malady." It was very interesting to me. I have been experimenting on that crop for some years. I broke up a good sod for potatoes as soon as the frost was out and the ground settled. I did not plant till June 5th. The soil was in fine condition. I measured off a piece eight rods long and four rods wide to experiment upon. I planted 1st, Two rows of Carters, thirty-six hills in a row, and applied four quarts composition (three quarts leached ashes and one quart plaster) to each row. 2d, Two rows Carters; applied two quarts plaster to each row. 3d, Two rows Carters; three quarts unleached ashes and one quart plaster to each row. 4th, Two rows Mercers; nothing applied. 5th, Two rows Mercers; eight quarts of leached ashes to a row. 6th, Two rows Mercers; half a bushel of charcoal (coarse) to each row. The application was made on the potatoes in the hill before covering; nothing more applied. They were dug the last week in August.

Result.—No 1, Yield—66 quarts good; 4 quarts unsound, but not rotten. No. 2, 50 quarts perfectly sound; none unsound. No. 3, 54 quarts sound; 2 quarts unsound. No. 4, 44 quarts sound; none unsound. No. 5, 68 quarts sound, but a number of them somewhat discolored—saved for seed; 18 quarts rotten and unsound—many so rotten as hardly to hold together till measured. No. 6, 61 quarts good; 12 quarts rotten and unsound.

Now for a few facts of personal observation on the above, then a few queries, and I have done:

I observed that wherever the ashes and tuber came in contact, there was rottenness on that side of the tuber in every instance. I dug them myself with care, and my observations were as close as I was capable of making—perfectly satisfactory to myself at least. Where I applied gypsum alone, I noticed that where the gypsum and tubers came in direct contact, there was no rot or decay in any instance. I applied a gill of plaster to a hill for a few hills adjoining the above experiments. There was no increased vigor to the vine, nor apparently any increased product of potatoes, but the potatoes were perfectly sound. The vines of the 5th experiment looked beautiful and vigorous, and could be distinguished for twenty or thirty rods, and I expected great results. I expected that the charcoal in the 6th experiment would result in a rather good yield from its quantity, but I was somewhat disappointed.

Has the result of unusual rottenness following the application of ashes *directly on the seed* been observed by others? and would the result have been different had the application been made *on the hill*, so as not to come in direct contact with the tubers? Would gypsum *in* the hill and ashes and gypsum *on* the hill change the result? It appears to me that it would.

I am now done for the present on the potato experiments. I shall make further experiments the present year.

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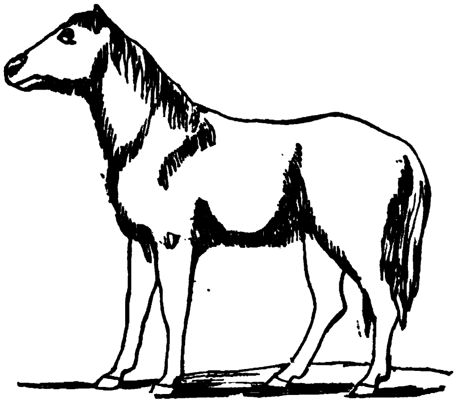
HORSES FOR THE FARM.

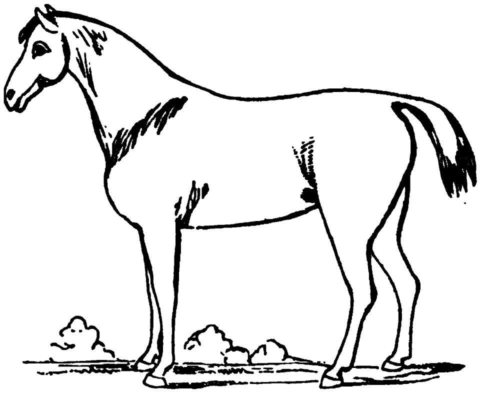
Notwithstanding the inroads made upon horse-labor by our great railroad system, the horse continues to be, and will continue to be, one of the most important of domestic animals. For the past year or two the price of horses, and especially *good* horses, has been advancing. Indeed it is no easy task now to get a pair of working horses combining strength, speed, hardiness, and other important qualities. Horse-breeding we believe has been, and is now, conducted in a most unskillful and deplorably careless manner. We may station ourselves on a road leading to one of our large cities, where two or three hundred teams pass and repass in a day, and out of the whole number we venture to say that one span of good farm horses — say sixteen hands high and weighing about 1400 lbs., well proportioned, sound, strong, and hardy, — can not be selected. We have spent some time in looking up good horses, and therefore speak from experience. The majority we find to be long-legged, long-backed, narrow-chested animals, fit only for the road before a light carriage. A man having half a dozen of them at hard work, would require a veterinary surgeon on his own establishment. Where we do find any considerable degree of strength and robustness, we find also excessive coarseness and clumsiness. We admit some exceptions, but they are few and far between. Light, active, sprightly carriage horses, and fast goers, are not scarce. The fact is, our breeders of horses have been aiming at speed too much. The immoral race-course is ruining our horses, filling the country with a mongrel race absolutely worthless.

It is time that this matter should be urged upon the consideration of our farmers who make it a part of their business to breed horses. We know nothing about the profits of the business, but we know very well that if it pays to raise a horse that at four or five years old can scarcely be sold for $100, it will pay to raise one that will sell readily at the same age for twice that amount. With a good stock on hand, it is much easier and cheaper to raise a good horse than a bad one. The improved system of farming which is now being put in practice will require better horses, and farmers will find out soon that it will be much better to have one span of horses than two. How common it is every where to see four horses performing *badly* what two ought to do *well*. The time is at hand when the farmer will consider it economy to give $400 for a pair of horses, instead of $200. Farm carts will soon be introduced extensively; and with them a good, heavy, active horse, will do more work in a day than a yoke of oxen in two; but a light legged horse is of no use in a cart.

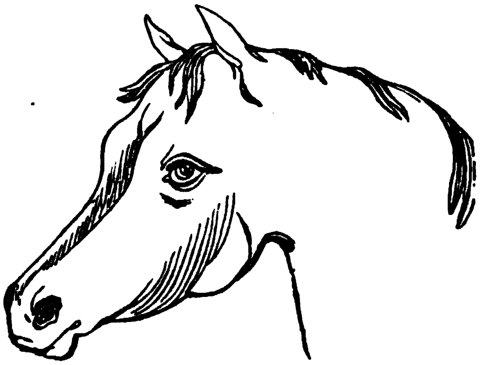
Much can be done to improve our present race of horses, by judicious breeding. Place a mare having some desirable points with a horse whose prominent developments are such as, combined with the good parts of the mare, you wish to obtain in the foal; and in this way, if the mare is not too old, and is kept warm and comfortable during winter, doing little work, and the foal be never starved when young, a horse may be expected that will amply pay for the extra expense and trouble, costing no more to keep than one not capable of doing half the work.



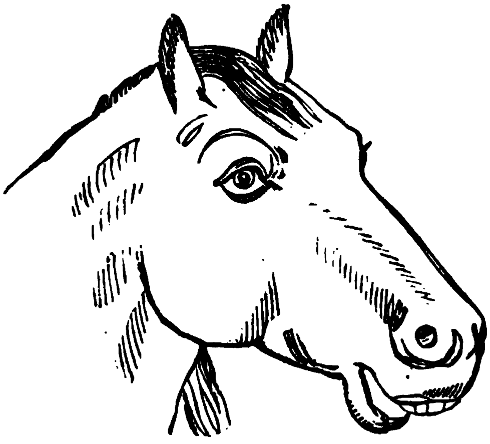
OUTLINE OF THE WILD TARTARIAN HORSE.



OUTLINE OF THE MODERN HUNTER.



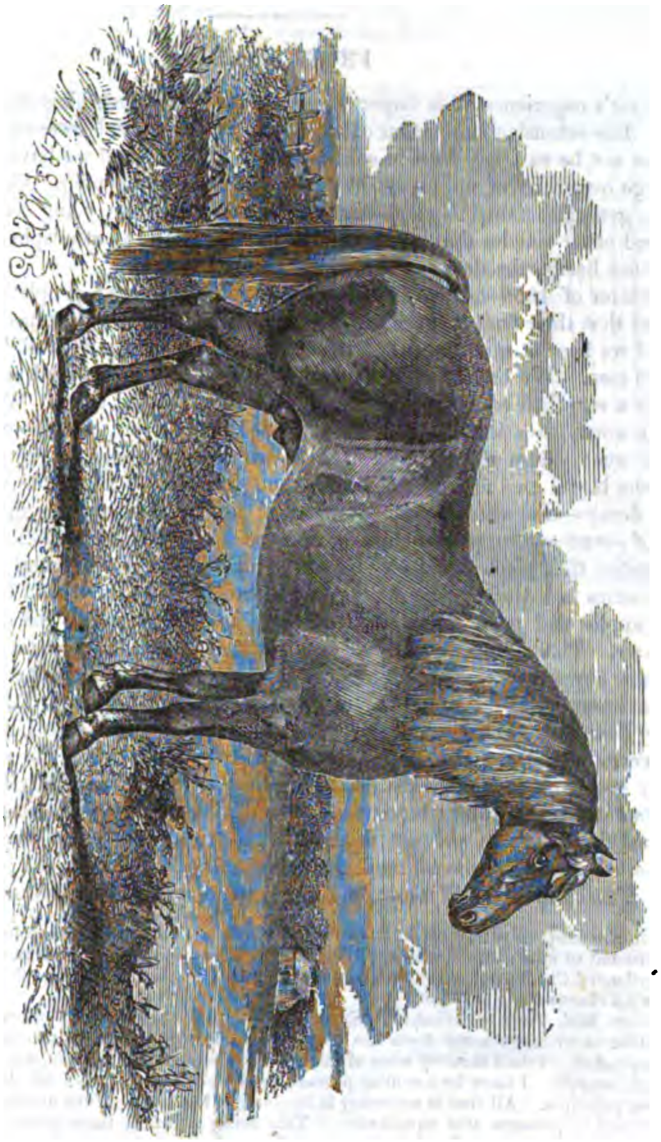
OUTLINE OF THE HEAD OF THE ARABIAN HORSE.



OUTLINE OF THE HEAD OF THE HUNGARIAN HORSE.

The power which man possesses to improve different races of animals, is well illustrated by the difference between a wild Tartarian horse and a modern English Hunter, or the horse as he was and as he is. The large, heavy head, angular bones, rough and shaggy coat, and coarse, heavy legs, have given place to a graceful form, small intelligent head, arched neck, slanting shoulder, clean and nimble legs, showing that mind has been at work moulding the plastic frame which nature has given, into one better fitted for the requirements of man. Further: an Arabian horse, brought up amidst and treated as one of the family, the instincts of attention and understanding daily cultivated and strengthened; exhibits a head which for intelligence and beauty is unequalled: while the Hungarian horse, removed from man's sympathy and care, has a heavy, sullen, unimpassioned head, in every way the contrast of the intelligence seen in the Arab's. This is accomplished—not in a day; but is the work of ages. Yet, when a superior breed is obtained, nothing is easier than to perpetuate or improve it, no fact being better established than that the offspring inherits the form and peculiarities of *both* parents. In this fact lies the grand means of improving not only our present breeds of horses, but of all farm stock.

The object of these remarks is to introduce a notice of the finest specimen of an agricultural horse that the world can produce at the present time. The Suffolk horse, or "Suffolk punch," has long been celebrated in Norfolk and Suffolk, the finest agricultural districts in England. The breed we believe is no longer in its purity, having been greatly changed by crossing; yet at this day they have no equal. We had the pleasure of seeing the magnificent display at the great Windsor show last summer, and no animals on the ground interested us so much as these noble Suffolk horses. A prize of £30 ($150) was offered for "the best stallion of any age for agricultural purposes," and this horse took the prize in a competition never before equalled in England, or perhaps in the world. Look at his compact, strong, and yet graceful form. There is nothing of your stupid, clumsy "Samson" about him. His movements are as active and graceful as a "full blood," yet his deep shoulders are made for the draught. It is said in England that a Suffolk team will do a greater day's plowing, and return home in better condition at night, than any other of the powerful English farm horses. Some very injudicious importations of horses have been made to this country. Will not some of our horse men import this stock? They would confer great benefits on the country by so doing.



A SUFFOLK STALLION.

THE PROPERTY OF MR. THOS. CATLIN, OF BUTLEY, NEAR WOODBRIDGE, SUFFOLK, FOR WHICH THE FIRST PRIZE OF £30 WAS AWARDED AT THE MEETING OF THE ROYAL AG. SOCIETY OF ENGLAND, HELD AT WINDSOR, JULY, 1851.

Horticultural Department.

CONDUCTED BY P. BARRY.

FRUIT ROOMS.

Every year's experience adds importance to the inquiry concerning the structure of fruit rooms. The extensive cultivation of the pear gives it special interest at this time, for pears can not be so safely kept in cold cellars as apples. But we have reason to believe that large quantities of apples are annually lost by bad keeping. Cellars under dwellings are generally damp to some degree, and warm, besides being occupied with vegetables and other articles that communicate impurities to the atmosphere, and affect the flavor if not hasten the decay of fruits.

The winter of 1850–51 was somewhat unusually mild, and people complained in all directions that their fruit "never kept so badly." The past winter has been remarkably cold, and we hear it said all around that "fruits keep unusually well." We know this to be the case. We had brought us early in the winter, by a friend, a barrel of favorite apples in a very bad condition, apparently in a half decayed state. We concluded they were not worth attention, and left them headed up in a dry, cool room, where the thermometer was seldom more than two or three degrees above the freezing point. We opened the barrel two months afterwards, and found they had made not the least progress in decay — the cold completely arrested it. In the same room we have several barrels of sound apples, placed there in November; and on examination now, in March, are so perfect that not half a dozen specks, indicating decay, are found in a barrel. The same varieties in a warm cellar have decayed much. We have even been able to keep autumn apples and pears sound till February, in consequence of the dry and excessive cold winter. This affords indications that may be turned to good account, viz: that a low, steady temperature, with dry atmosphere, are the chief requisites for a fruit room.

In a late number of the English Gardeners' Chronicle, Mr. Robert Thompson gives the following description and plans of the fruit room of a gentleman near London, who has for several years exhibited pears in fine condition at a season when the same varieties are generally gone. It illustrates the leading principles to be observed in building a fruit room; but it must be remembered that in our northern States at least, greater precautions must be taken to prevent freezing. Thick walls with air spaces, or filled with some non-conducting material, and thick floors, &c., are among the essentials in this regard. The Hon. M. P. Wilder, of Boston, writes in the Horticulturist —

> My fruits are keeping admirably in the new fruit room. This room happens to have been situated and constructed so much like Mr. Morrison's, (of which you have seen the drawings and description in the Gardeners' Chronicle,) as to be almost a fac-simile of his. The walls of mine, however, are filled in with charcoal and sawdust.
>
> The *Beurre Diel*, *Vicar of Winkfield*, *Excellentissima*, and other autumn pears, are now in as perfect condition as when gathered from the trees, and so they will remain till the warm weather of spring approaches. I shall then try some of them in the non-conducting boxes, where I think they may be kept till summer. I have by a similar process, preserved some varieties till July. Mr. Morrison has no new principle. All that is necessary is to obtain a low temperature during the warm weather of autumn, and to preserve this equilibrium. This being attained, there is no difficulty whatever. When the severe weather of last month occurred, my fruits were removed from the shelves and packed in boxes, with a thin layer of clean rye straw between each tier, the tubes of the straw containing air enough to correct mildew and damp. The boxes are now piled on one side of the room, and covered with hay about three feet in depth.
>
> My experiment was suggested by the bad effects of moisture and warmth in my old fruit cellars, under my dwelling house, and the same difficulty exists with rooms on the ground floor of buildings. I therefore resorted to the other extreme—a cool and dry chamber on the north end of my barn, the location of which you know, (and like Mr. Morrison's,) over the carriage room. I am now quite

satisfied that we have at last ascertained the proper location for a fruit room; namely, a cool upper apartment, with lined non-conducting walls. M. P. W.

Description and Plans of Mr. Moorman's Fruit Room.—The room was not originally constructed for a fruit room; but, by a little adaptation, Mr. Moorman has succeeded in rendering it a most excellent one, as is proved by the prizes awarded for the productions exhibited from it,—not in any one year, but repeatedly, year after year. It is a partitioned-off portion of a loft which extends over a coach-house and stables, and is that part which is above the coach-house. It was originally fitted up for a harness room, the walls, as is usual in such places, being lined with wood. The roof is slated. The range of building is detached, and faces the southwest.

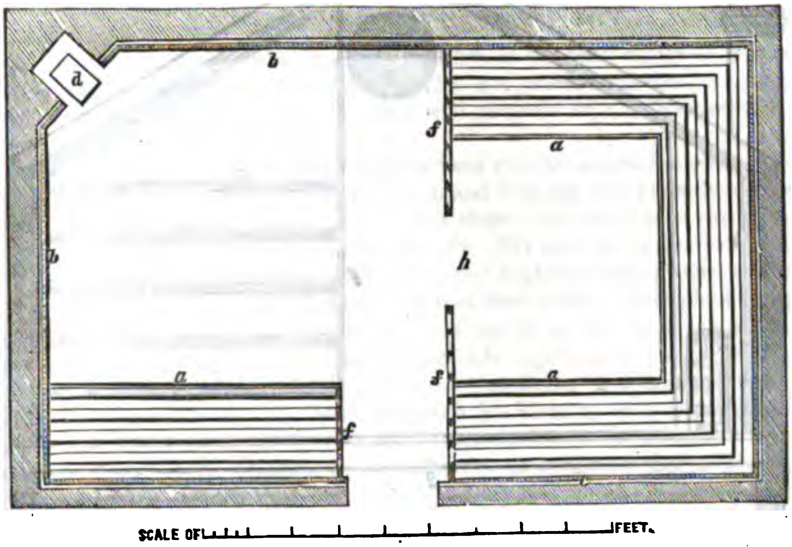


Fig. 1. PLAN OF MR. MOORMAN'S FRUIT ROOM.

It will be observed that there is a cavity, c, between the boarding and walls. This, I believe, is an important circumstance, and so is the wooden lining, because air and wood are known to be slow conductors of heat. The ceiling on the north side is double, and the floor is wood above a ceiling. We may therefore conclude that a uniformity of temperature in the interior of the room is insured to a considerable extent. There is a small stove, d, but it is seldom used, and never with the view of warming the air of the room, unless the temperature is actually below freezing. The fruit is therefore kept cool. The swing-window, e, is occasionally a little opened; but it is at all times covered with a roller-blind, so that the fruit is kept in the dark. A little fire in the stove, air being freely admitted by the window at the same time in a dry day, is useful for speedily removing any damp which may arise from the fruit. The shelves, a, a, have a layer of clean-drawn straw laid across them; on this the fruit is placed singly.

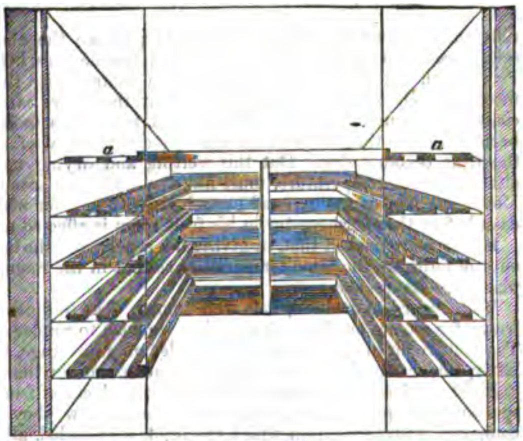


Fig. 2. INTERIOR VIEW.

From a consideration of all the above details it may be inferred, that if a fruit room be built over a place where there is a free circulation of air, its roof double ceiled, the walls lined with wood, a cavity being left between these two, it will possess the essential properties of the one under consideration.

The more important principles necessary to attend to, with regard to the long keeping of fruit, are uniformity of temperature, coolness, and darkness. If the temperature is uniform, there can be little or no deposition of moisture on the surface of the fruit; but if the air of the room should be, say 10 degrees warmer than the fruit, then the relative coldness of the latter will cause a condensation of the moisture contained in the air in contact with the fruit, just as a cold glass becomes dewed over when brought into a warm atmosphere. If the air is indeed very dry, then a proportionately greater difference of temperature is necessary to produce the above effect; but in winter the hygrometer seldom requires to be cooled more than a few degrees before it indicates a deposition of moisture. Fruits with smooth, glossy skins, in close contact with the cold substance beneath them, are those most profusely covered with moisture from the above cause. In russeted varieties, their dry, rough coats serve as non-conductors of heat, and hence less moisture is deposited on them. When the air becomes colder than the fruit, a contrary action—that of evaporation takes place, and the surface of the fruit becomes dry. But this wetting and drying must prove very injurious; while its cause, alternations of temperature, must likewise affect the specific gravity of the juices of the fruit. Mr. MOORMAN's fruit is not exposed to such vicissitudes; for when the weather becomes frosty, it is several days before the thermometer in his fruit room is affected as much as one degree.

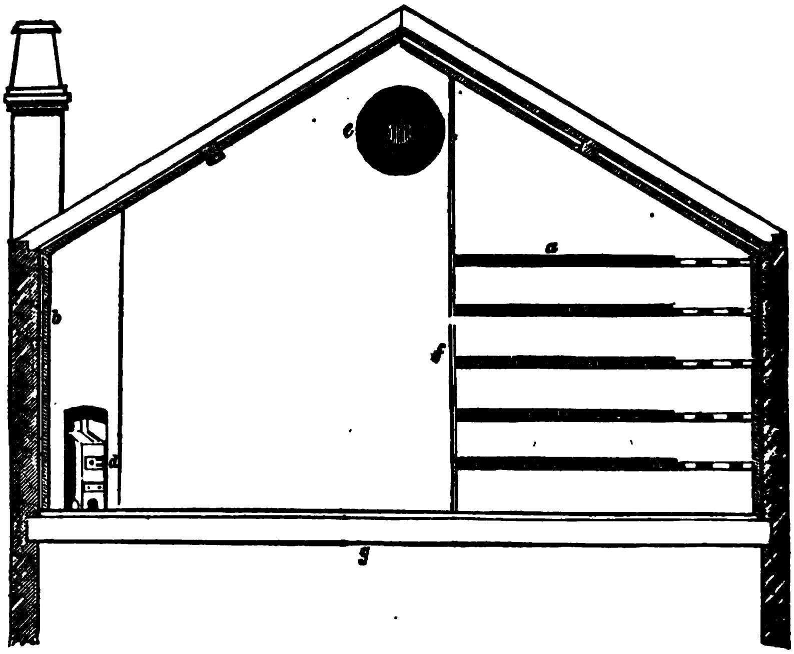


Fig. 3. LONGITUDINAL SECTION.

Explanation of the letters.—*a*, Shelves made with battens, 1½ inch wide and 1¼ inch apart. *b*, Close boarding around the sides of the room. *c*, Air space between the boards and the wall. The roof has also an air space on the north side between the two plaster ceilings, as shown on the section. *d*, Stove. *e*, Circular window hung on pivots, and fitted with a roller-blind. *f*, Partitions of open work similar to the shelves. *g*, Coach-house under fruit room.

It may be remarked that, in giving air, a period of the day should be chosen when the thermometer outside indicates the same temperature as that in the room. No deposition of moisture can then take place in consequence.

With regard to coolness, it is well known that this condition is favorable to the long-keeping of fruit; for we act on the contrary when we wish to render any variety fit for use before its usual time. The fruit room in question must be cooler on an average, than if it had been on the ground; for the latter, under a building particularly, is much warmer than the air in winter.

Light accelerates the maturity and ultimate decay of fruit exposed to its influence. If the soundest specimens are picked and placed opposite a window, they soon become much inferior in appearance, compared with those from which the light is excluded, all other circumstances being the same. In Mr. MOORMAN's fruit room, the light is excluded by a blind, even when air is given.

By such arrangements as those above detailed, Mr. MOORMAN keeps the *Marie Louise* in fine condition till after Christmas. He possesses a selection of the best varieties of pears, which he grows chiefly on espaliers, which are well managed by his gardener, Mr. TUCKER, in the Clapham-road. He had some remarkably handsome specimens of the *Winter Nelis* in his fruit room in January, much larger than that excellent variety usually grows. We have also seen very large specimens of the *Marie Louise*, grown at his seat at Box Hill, in Sussex. The tree which produced them is trained against the gable end of a barn, about a quarter of a mile from the sea, and this tree is exposed to the strong sea-breezes from the southwest. It was planted in good soil, and a spring below it was discovered when digging the hole for the compost, previous to the tree being planted.

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HINTS FOR THE SEASON.

April, throughout a large portion of the country, is the busy month of horticulture. *Grafting* may be continued, especially of apples and pears, until the leaves begin to expand, if the scions have been cut in season and properly kept. Cherries and plums should have been done last month.

Transplanting may be continued as long as trees may be obtained in good order. It often happens that persons residing in the south and west can not obtain their trees from the north until the planting season is past with them; but as long as the trees to be planted are in a dormant state, planting is safe. We plant trees successfully here as late as June, when they have been retarded by being kept out of the ground a long time, as when imported. The month of May is the best time in the year to plant evergreens.

Dahlias, and all *bedding plants*, are best put out about the latter end of May; all danger of frosts is then over, and vegetation proceeds rapidly and safely. We do quite as well with dahlias put out in June; they come into bloom at a favorable time, when the hottest weather is over. We intend to give a few hints on their management next month.

Annual Flower Seeds, where to be sown in the open border, should not be done until the weather is steadily fine, and the ground dry and warm. The soil should be made as fine as possible, as the seeds are generally small and the plants delicate. The covering is an important point; it should be very light and even. A very thin coat of fine moss aids in preserving a uniform degree of heat and moisture. Transplanting annuals, either from hot beds or from the open border, should if possible be done on a moist or cloudy day; and if the sun comes out strong immediately, a slight shade should be given. In cases of drouth, watering should be well attended to. Where seed beds are watered, a finely pierced rose should be put on the spout of the watering pot, that the water may fall like a gentle rain, and not disturb the earth or seeds.

Lawns, *Edgings*, *Walks*, *&c.*, will require a dressing. A little attention now to existing defects will give satisfaction during the whole season. Ornamental shrubs or trees requiring a slight pruning to put them in good shape, should receive it now; and all climbing roses, and other plants, be neatly adjusted on their supports.

The Kitchen Garden, if looked to for a constant and liberal supply of vegetables, must receive due attention. It happens frequently with the farmer, that his kitchen garden is neglected until the press of farm work is over, and then it can only yield a few of the common vegetables about mid-summer. How cheap the Farmer can have *radishes*, *lettuce*, *green peas*, *beans*, *asparagus*, *cabbages*, *cauliflower*, and the other luxuries that people in the city get so poor and pay so dearly for. Begin now; take the warmest and dryest border facing south for your early crops. Lettuce, peas, beans, potatoes, &c., can be planted any moment, and may have been long ago. Plant few at a time, and keep up the succession. Such articles as radishes, lettuce, and green peas, may be on the table all summer, if desired. It would certainly pay every farmer who has a large family, to keep one man most of the time in the garden; unless during haying and harvesting, when he might turn out. There is economy, to say nothing of the comfort, in keeping the table well supplied from the garden. Buist's book on the "Kitchen Garden" will be a great aid to those who do not keep a gardener.

Before closing our brief chapter of hints, intended merely to refresh the memory, we must say a word about *liquid manure.* This should be considered as an indispensable article in every garden. The drainage of the stables may be saved, or the liquid may be made in a barrel or tank with rain water and manure. All growing crops in the kitchen garden should be freely supplied two or three times a week; it forces their growth, and makes them tender and succulent. Strawberries, just after the fruit is set and until it begins to ripen, will be greatly benefitted by an application two or three times a week. The great advantage of liquid manure, and what makes it act upon plants like a "charm," is that it is in a fit state to be immediately appropriated by them. Solid manures have to remain in the ground long enough to be dissolved.

Insects require constant watching. *Caterpillars* on the apple trees; the *curculio* on the plums, apricots, and nectarines; the *aphis* on the foliage of various kinds of trees; the *peach worm*, or *borer*, and the various other insects that prey upon trees and plants; come forth at their appointed time: and, to repel them promptly must be as much the business of the cultivator now, as to sow his seeds or plant his trees.

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THE CANDYTUFT.

The *Purple Candytuft*, an engraving of which we give, is an annual plant, growing to the height of about a foot, with spreading branches and large heads of purple flowers. The species is a native of Candia, and seeds were taken to England about the year 1590. From that time it has been a general favorite in British gardens, and should be grown by all lovers of flowers, for its beauty and easy culture. It grows well on almost any rich soil, if not too moist; and as it will not bear transplanting well, it should be sown where it is to remain. Sow from the 1st to the 15th of May. Superior flowers will be obtained by soaking the ground occasionally with liquid manure, readily obtained by placing the cleanings of the fowl-house in a barrel with water, and keeping on hand a constant supply. When the plants are going into flower the heads should be examined; and if too numerous, they should be removed. By this treatment, and occasionally loosening the ground around the plants, and keeping it free from weeds, flowers have been grown three inches across, most beautifully colored, being of a very dark purple on the outside, and softening to nearly white in the center. The great points are thinning the flowers gradually as they increase in size, and supplying their roots with abundance of rich food when they are going into flower. By this mode of treatment much finer flowers may be grown than those usually seen in our gardens.

PURPLE CANDYTUFT.

The *Rocket Candytuft* is a splendid variety, growing two feet high, branching widely, each plant producing three to five racemes of flowers from six to ten inches long, and the center one even longer than this, if properly cultivated. Cultivation the same as the *Purple.*

Editor's Table.

FLOWER SEEDS.—Our applications for flower seeds now count up more than four thousand, and every one will be sent previous to the 5th of April. Some apply for double dahlias, verbenas, and other plants that are not propagated from seed, but from bulbs and cuttings, which it will be impossible for us to send. The following persons have made application for packages of seeds, without giving in their Post office address: Mrs. A. S. Manly, Mary Coon, Clarinda R. Sanders, Mrs. D. L. Ackerman, J. L. Anderson, A. M. Mc Fatridge, C. Wire, Mary C. Saunders, Louisa Luce, Mrs. D. Bouck. These will have to send again, giving us the name of Post office and State.

IF any of our brethren of the Agricultural Press wish to engage the services of an editor who is a good practical farmer, and thorough chemist, well acquainted with the best systems of agriculture in this country and in Europe, and who for several years assisted Messrs. LAWES and GILBERT in their invaluable experiments, they will please write us on the subject.

CLOTH FOR HOT-BEDS.—I see in your March number of the *Farmer*, that you say you can not speak favorably of cloth as a substitute for glass in hot-beds. You don't say why it is not successful. I used both the cloth and glass last season, and found in many respects the cloth was far superior to glass; so much so, that I shall this season wholly discard glass, and use the cloth instead. SYLVESTER LORD.—*Medusa, N. Y.*

Necessary absence about the time our hot-beds should have been in perfection, prevented our testing the matter personally as we intended to do, and consequently we had to rely on the statement of those to whose care they were committed. We are gratified at the statement of Mr. L.

Inquiries and Answers.

(John B. Jones, Patterson.) **CARROTS.**—We know of no better manure for carrots than well rotted barnyard manure. 300 lbs. per acre of superphosphate of lime may be added with profit. Four pounds of seed per acre is sufficient. It should be sown in rows about one foot apart, as it is then much easier to keep the land clean. The superphosphate of lime should be placed as near the seed as possible.

(W. V. Morse, Hayfield, Craw. Co., Pa.) We believe there is no cure for horses that have the heaves badly; but much may be done to relieve them by judicious management and feeding. The horse affected should never be worked hard on a full stomach, nor allowed to drink large quantities of water at once. Dusty clover or hay is very injurious. Good clean timothy, cut fine and moistened with water, and if convenient, mixed with shorts or bran, is the best food. Equal parts by weight, of sulphur, saltpetre, antimony, and liquorice powder, mixed together, is a good cordial medicine for such horses in the spring. A table spoonful should be given in moistened shorts twice a week.

AMMONIA.—Can you inform me how to manufacture ammonia? I have read in some book, that large quantities have been manufactured in England by the use of common salt; but that the duty on this article is so high there, that the manufacture has been abandoned. T. H.—*L. Island.*

We believe there is now no duty on salt in England, and *muriate of ammonia* is extensively made; but the impure article used for agricultural purposes sells for $100 per ton, and though it greatly increases the produce of wheat, yet at the present price of wheat it does not pay to apply it. The cheapest method of obtaining ammonia, is by growing green crops extensively and consuming them with cattle or sheep, giving them oil-cake or other rich nitrogenous food.

COAL TAR.—Will coal tar at $2.50 per barrel preserve shingles enough to pay the cost of painting them with it? Will the building be more likely to take fire with it on the roof? How would you apply it? I am altogethor unacquainted with it, but have heard it would be beneficial if applied. A. KENT.

We know of no substance so cheap and so beneficial to preserve wood of all kinds, as coal tar. Have never seen shingles painted with it, but think it would render them more durable. They are themselves highly inflammable, and a coat of coal tar would rather diminish than increase their liability to take fire. It could be applied with a common white-wash brush. Gates and board fences, barns, out-houses, &c., would be greatly benefitted by an application.

ONIONS.—We have received many valuable communications in answer to the inquiry of S. A. D. T. K. in the February number, from which we give extracts that will be found interesting.

"The ground best adapted for the growth of onions is what is generally termed a good wheat soil. The year previous to sowing onions, I plow the land deep; manure well with horse dung, and plant to potatoes or corn. After the crop is off in the fall, yard sheep on the land, removing them before feeding hay in the spring. I stir the surface of the ground only with a cultivator, and sow the seed as early as the soil will admit. In raising the black seed or common onion, I sow in drills 13 or 14 inches apart, sowing four times as much seed as I intend to have remain should it all grow. When of sufficient size to weed, I use the hoe, and the drills being straight allow me to cut close, leaving but little to weed by hand. Where I find them too thick I cut them out with a sharp hoe, about five inches apart, leaving five plants in a hill. Where there are any missing, I transplant. In this way I usually obtain good crops. Last year I had 281½ bu. from 45 rods of ground treated in this way. G. N. Hathawley.—*West Potsdam, N. Y.*"

"Top Onions.—I always place my top onions in the ground as soon in the spring as I can get them in—sometimes in March, but always as early as April. Those intended for raising seed should be set deeper in the ground than those for bottoms. The largest seedlings will raise seed. I cultivate for seed, therefore break no tops. I save my old onions, which are sound, to re-plant in the spring. I have had good success in keeping, as follows:—The seed will do to cut from the stalk when the stalk begins to dry up, which will be generally the last of July or first of August. The seeds are laid in a dry, airy place. The bottoms are left—those I use for seed—till the last of August or first of September. They are then taken up and dried in the sun a day or two, and are then removed to a dry place. When winter is about to set in, I put them all in old sacks or bags, from a bushel to a bushel and a half in a bag, after looking them over carefully and putting up none but sound. I then place these bags in my chamber, over my kitchen, and hang them up. I sometimes keep the bottoms in my cellar, but it requires more care. There is no fire in the chamber, but the heat from below. It will not spoil them to freeze, although I prefer not to have them, but keep them dry and cool. A. S. Moss.—*Fredonia, N. Y.*"

"I shall not undertake to answer strictly the inquiries contained in your February number, but will give some of the experience of twenty-five years practice in raising from 1000 to 2000 bushels of onions each year, without ever failing for the last twenty years. There are three important considerations to ensure a large crop of onions:

1st. Rich land, well prepared with fine manure.

2d. Sow the seed early, if possible the first time the land is dry enough after the snow is off in the spring, in rows 14 or 16 inches apart.

3d. Thin out to 1½ inches in the rows, and to be kept free from weeds.

The general cause of failure is late sowing; onions will not bottom unless sowed early; those sown early will never fail to be proper onions, but the size will depend on the quality of the land and the manner of tilling. Some are yet of the opinion that the only certain way to ensure a crop of onions, is to raise from sets; this is a mistake. The experience of the last ten years has shown that the quantity of onion seed used, in proportion to other seed, has five times doubled in sections (particularly at the south) where the idea has been prevalent that onions could not be raised from the seed the first year, which is altogether erroneous. Wm. Ribley.—*Fredonia, N. Y.*"

To Kill White Birches.—As there has been inquiry made as to the best mode of killing White Birch, I would say in reply, cut them in the spring before the leaves start; cut the stumps two or three feet from the ground and it will be sure death. Some may object to cutting them so high up, but if cut close to the ground, there will start fifty from one. The stumps will rot in one year. E. P.—*Rose, N. Y.*

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Ice Houses.—I want to erect myself an Ice House during the ensuing summer, so it may be ready to fill next winter. I would be pleased to be informed by some of your numerous correspondents the best mode to erect one, as a building of this kind with us is quite a novelty. Cannot it be filled in cold freezing weather by letting a small stream of water run in at the top of the building from my water-fountain, which is high enough to let it in at the top. S. John.—*Mount Comfort, Pa.*

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Dairy House.—I design building a Milk or Dairy house—should I put it two, three, four, or five feet below the surface of the earth? Should I have a flag-stone floor? Can I have *too much* ventilation on the north side? Should I have more than half as much on the south side as on the north, and should those windows be near the top of the room for the warmed air to pass off? Should the sides, or the south side, be filled in between the siding and inside plastering with tan bark, or not? Should the space between the roof and inside of the rafters be filled with tan bark? In fine, do give us a good plan for a Dairy House—practical, plain, and not too costly. I have never seen a very large number, but I have never seen a good one. E. H.—*Manorkill, N. Y.*

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HORTICULTURAL.

(J. D. V., Benton, N. Y.) Apples.—Your specimens came to hand somewhat damaged, but it is a tender, juicy, sweet fruit—as good as any of its season—and if a good grower and bearer, worthy of cultivation. Send us a couple of grafts in a letter.

(W. J. B., Grand Rapids, Mich.) You can procure Horse Chestnuts of the seedsmen, in the Autumn, at about $5 per barrel, perhaps less. Sow in drills four inches apart, cover three inches deep, and when they have grown one or two years, transplant into nursery rows.

(W. S. H., Ballston Spa.) We are not aware of the Sarracenia being cultivated in gardens successfully. It would require low, marshy ground. It is, as you remark, "a curious and elegant plant," better appreciated abroad than at home. Thousands are annually sent to Europe.

The best book on general floriculture is Breck's; the best special, rose treatise, is Parsons'. We cannot answer as to "what rose bears the highest reputation." It depends upon the character desired. *La Reine*, Hybrid Perpetual; *Souvenir de la Malmaison*, Bourbon; *Cloth of Gold*, Noisette; *Devoniensis*, Tea; are all celebrated and fine roses of their respective classes.

(J. M., Albion, Iowa.) We fear you will never succeed in growing peaches on your rich, deep, black loamy soil—"two to three feet deep in a clay subsoil." As you remark, the trees grow too rank, and too late in the fall. You must have dry, gravelly, or sandy upland. It might be well to put a bed of stones and gravel under each tree, and mix sand and gravel with the soil about the roots; work them also on plum stocks.

(A Subscriber.) In grafting the limbs of large trees, it is neither necessary nor proper to cut them back to the trunk, but merely so far as will bring the new shoots at a proper distance from one another to make a good shaped head.

(M. H. H., Perry, Wyoming Co., N. Y.) Neither the *Chromatella* Rose, nor *Double White Althea*, are hardy enough to bear our winters unprotected. A slight covering of straw protects them. All the other Altheas are hardy enough.

(T. K., Cavan, C. W.) Pears on quince stocks succeed well on all good soils. A deep, dry loam is best; gravelly soil should be avoided. The quince itself succeeds as well, and better, on a dry soil than a moist one, provided it be deep and good. The cold vinery will be forthcoming soon.

(J. H., Newstead, Erie Co., N. Y.) SUBSOIL PLOWS.—We use the No. 1 Subsoil Plow made by Ruggles, Nourse & Mason. In clear land without stones, two horses, following the common plow, will pulverize the bottom eight or ten inches deep; if stony or gravelly, four horses will be required. For very heavy work, we would recommend No. 2 of the same make.

PLANTING TREES IN A WHEAT FIELD.—If you do this, you must keep a clear space of at least six or eight feet all around the trees, or they will be ruined.

(Mrs. J. H. W., Whitesboro.) The green insects on your roses are *aphides*, easily killed on your house plants with tobacco smoke, and on the garden plants with a mixture of soap suds and tobacco juice thrown freely over them with a syringe, or by dipping in the branches.

(J. W. C., Bull's Pond.) The *Northern Spy* fully sustains its high character here. We do not hesitate to call it the *best* of all long keepers.

(H. K. E., Rockford, Ills.) We refer you to the Nurserymen's advertisements; any of them will send you a catalogue.

The Osage Orange is easily grown. You can get seed of any seedsman at 75 cts. to $1 per quart, and young plants from the nurserymen at $10 per 1000. Sow the seed as you would peas. The plants are set in a row, for a hedge, six inches apart, in good, clean, well prepared soil. We will be thankful for any information in regard to your section.

(H. C., Huron, N. Y.) You can use either the English or American Thorn for stocks for the pear. Paradise stocks, and dwarf Apple trees, may be had at any of the nurseries. See advertisements.

(A. V. B., New Paris, Ky.) The seeds will be sent. Enclose us a few melon seeds in a letter, by mail.

(P. F. E., Cross Keys, Va.) We cannot recommend you a cure for "bitter rot." It prevails in certain localities, and in some varieties more than others. Renew your stock from the north, and plant on *dry* soils.

(D. S., McGillivray.) You will find a recipe for grafting composition in back numbers of the Farmer. Rosin, beeswax, and tallow, in equal parts, melted together and well worked, answers very well. See Hints for this month.

(M. C. W., Chagrin Falls, O.) Follow up the tobacco solution and it will destroy the insects you allude to effectually. White-washing is of no use, as it is the leaves they feed on.

(J. L. E., Mexico.) It is not good to plant trees on green sward; but if you must do it, dig and pulverize well a space four or five feet in diameter around each tree. Plowing ridges six feet wide, for each row, would answer. Keep the ground clean about the trees all summer.

(A. T., Amboy, Ohio.) *Hovey's Seedling* strawberry can be procured of any nurseryman, at about $2 per 100.

(Subscriber, Rushville, N. Y.) The ground, for hedge plants, should be well plowed or trenched, in as good order as for corn. You can set the row a foot from the stone wall. We would recommend you Buckthorn, as we are not sure that the Osage Orange will be perfectly hardy. We think it will, as our hedge now looks well after the hard winter.

J. H. L., East Charlemont, Mass., inquires if any of our correspondents know of any method of preserving trees that have been girdled. We know of none.

(T. N. M., Canandaigua.) Some of your seeds may come up this season, but it is doubtful. They were either too old, or some way mismanaged.

(S. E. P., Potter's Hollow.) Use lime water. If badly infested, re-pot with fresh earth.

(J. H. C., Springport.) You can graft the Grape Vine before it begins to grow. Cut off the stock level with the ground, and cleft-graft as you would an apple tree; when the scion is secured, draw up the earth around it, leaving out one bud. The best way to protect tender sorts is to lay down the vine in the beginning of winter and cover with a few inches of earth.

(B. P. C., Pleasant Mount, Pa.) You can graft your *Mazzard* stocks, but it is now too late, so you had better bud them in August. If small, say not over half an inch in diameter, put in one bud within three or four inches of the ground; if large, bud the branches.

(S. G. M.) PRAIRIE RAIL TIMBER.—We recommend you the yellow locust. Raise the plants from seed; transplant at one year old, and in five or six years you will have rail timber. You can get seed at the seed stores generally. The European Larch is a rapid growing tree, worthy your attention. You can get seeds or plants, through the nurserymen.

(R. W., Macedon.) The best work on the indigenous Flora, is Gray's Genera of the Plants of the United States, 2 vols., beautifully illustrated.—Gray's Botanical Text Book is a smaller and cheaper work, and affords considerable information.

(H. L., Pleasantville, N. Y.) The Azalea is propagated by cuttings of young wood put in a mixture of sand and peat, and covered with a bell glass until rooted. It is also propagated by layers, and this is the easier way for you; put out the plants in a peaty border, and layer in the usual way, in July.

All communications, inquiries, &c., should be sent in not later than the 10th of the month, in order to receive attention in the following month's paper.

◆

WILLOWS.—Permit me, as a subscriber to the Farmer, to make a few inquiries relative to the Willow. In a number of the State Register, under date of March 8th, is quite a lengthy article from the Philadelphia North American, describing three varieties—*Salix Viminalis*, *Salix Capua*, and *Salix Alba*.

Where can the two first named varieties be found? What is the best manner of cultivating? What kind of soil is best adapted? and will it grow upon any soil? What is the usual and best way of cleaning the bark off the wood, and preparing for market?

A gentleman by the name of W. G. Haynes, a resident of this State, has grown some, but I do not know his residence. Please inform me if you can.

The above, and any other matter of interest, touching growth, &c., of the Willow, you will, if possible, answer through your columns or by letter. DANIEL MORSE.—*Lockport.*

The *Viminalis*, which is the common English osier, is the best for basket work, though several others are used for that purpose. The above sort can be had in small quantities at least, in many of the nurseries.

The best soil for the willow is a deep, moist, loamy soil near water, along streams, margins of lakes, &c., &c. Gen. HARMON, of Wheatland, has given some attention to this subject, and will probably be kind enough to furnish some of the desired information from his experience.

To Farmers.

CANVASS and Oiled Cloth Stack covers on hand, or made to order. E. C. WILLIAMS, AGENT,
Sail and Tent Maker, No. 12 Buffalo St., Rochester, N. Y.
April, 1852.

Peruvian Guano.

AND other Fertilizers. Several hundred tons of first quality of Peruvian Guano, constantly on hand for sale.

Also, Bone Dust, Plaster of Paris, and Poudrette.
A. B. ALLEN & CO.
April, 1852—tf. 189 and 191 Water st., New York.

Manures.

PERUVIAN GUANO, Bone Dust, Pulverized Charcoal, Poudrette, Plaster, Wood's Renovating Salts, Potash, Sulphuric Acid, Sugar-house Scum, for sale in lots to suit purchasers. LONGETT & GRIFFING,
[4-2t] 25 Cliff Street, New York.

To Nurserymen.

A FEW Quarts of European Mountain Ash Seed, clean from pulp, and will be ready to sow from 1st April to 1st May. For sale by the subscribers, at the Geneva Nursery, at $5 per quart. W. T. & E. SMITH,
[4-1t*] Geneva, N. Y.

Union Agricultural Warehouse and Seed Store.

RALPH & CO., No. 23 Fulton Street, New York, near Fulton Market, Dealers in all the most approved Agricultural and Horticultural Implements; Imported and American Field and Garden Seeds; Ornamental Shade and Fruit Trees; Guano; Bone Dust; Poudrette, &c. Wrought Iron Plows, Trucks, Barrows, &c., &c, always on hand. Also, the Excelsior, or California Plow. [3-3t]

Tents! Tents!!

FOR SALE, to rent, or made to order, of any required dimensions. Agricultural Societies wishing to hire Tents the coming season, will please make early application, as by knowing early how many, and at what time they will be needed, I can make arrangements to supply all.
E. C. WILLIAMS, AGENT,
Sail and Tent Maker, No. 12 Buffalo St., Rochester, N. Y.

N. B.—Flags, National and Agricultural, with devices, or any other kind, made to order at short notice.
April, 1852.

Spring Wheat.

WE have just received by the first Boat from Canada—
100 bu. of the celebrated Fife Wheat, which does not rust.
100 bu. Club Wheat.
100 " Black Sea do. grown in this State.
100 " Italian Wheat.
25 " Spring Rye.

Farmers who are in want of a good article, will please give us a call, and get some of the right kind of seed, at the Genesee Seed Store, 63 and 65 Buffalo st., Rochester, N. Y.
April, 1852. J. RAPALJE & CO.

Plows! Plows!!

WE are now getting in our spring supply of the celebrated Eagle Plows from Boston; also, the justly celebrated Curtis Plow, made by H. C. Curtis, Albion. These Plows stand unrivalled in this country, and are made expressly for use. They are made of superior timber, and the workmanship cannot be beat in this or any other country. All Plows sold by us are warranted to perform as recommended, or they may be returned and the money refunded.
J. RAPALJE & CO.,
Genesee Seed Store and Agricultural Warehouse, Rochester, N. Y.
March 1, 1852.

Cochin China and Shanghae Fowls for Sale.

THE subscriber has for sale a few pairs of his celebrated stock of *Cochin China* fowls, of his own importation, warranted true to their name and not excelled by any other stock in the country for good qualities. Also, a few pairs of of the Marsh Stock of *Shanghaes* and *Sumatra Game Fowls*. Reference given in regard to them, if desired.

EGGS FOR SETTING.

Eggs furnished from the above stock carefully packed for transportation, and orders for the same addressed to the subscriber will be promptly attended to. Price of Eggs $3 per dozen. CHARLES SAMPSON,
[3-2t] West Roxbury, Mass.

WRIGHT'S PREMIUM HORSE-HOE,

OR

Improved Shovel, Plow, and Cultivator, Combined.

Application filed in the U. S. Patent Office.

TO the above was awarded the first premium at the New York State Fair held at Rochester in September, 1851. This Implement is so arranged that it can be used between rows of any width, from two to four feet apart, and can also be governed as to the depth, by raising or depressing the wings or hoes. The earth can be removed from the crop when small, or hilled up in its more forward state. In other words, the operator can perform all that is necessary to insure a good crop of corn, potatoes, &c., without the aid of hand hoeing, provided the directions which will accompany each Machine, are followed.

The main difficulty with all Corn Cultivators heretofore in use, is this: they do not perform enough to obviate the necessity of using the hand hoe two or three times during the season, which, to the farmer, is a very heavy expense, at a season of the year when labor is scarce and high. It is believed by the Inventor that this Implement will save the cost in hand hoeing on every 15 acres of corn or other hoed crops, and that the work can be done equal or better than twice hoeing by hand. Price $10.

This Implement can be returned after one week's trial and money *refunded, if not satisfactory.*

Orders addressed to CASH & WRIGHT, Batavia, Genesee County, N. Y.

AGENTS.—E. Cash, South Byron, Gen. Co., N. Y.; Briggs & Brother, Rochester, N. Y.; G. Dodge & Co., Batavia, N. Y.; March & Brewster, Stafford; Bixby & Carpenter, Leroy; G. F. Barnet & Co., Brockport; T. C. Curtis, Albion; W. K. Marvin, Lockport; John S. Wright, Emerald Grove, Wisconsin.

And will also be for sale in most of the principal cities and villages in Western New York.

April, 1852. CASH & WRIGHT.

Wood's Renovating Salts.

THE subscribers are now receiving large quantities of this valuable manure put up in barrels, which we will sell at one cent per lb.—no charge for barrels.

This article is made from the following ingredients, viz.: Potash, Bone Dust, Bone Coal, Plaster, Glauber Salts, Saltpetre, Oil of Vitriol, Salts of Ammonia, Gas, Liquor, and Bullocks' Blood. For sale at the State Agricultural Warehouse, No. 25 Cliff street, New York.

LONGETT & GRIFFING.

We hereby certify, that our Renovating Salts are composed of the ingredients represented, and pledge ourselves to refund the money in all cases, to purchasers who can produce satisfactory proof to the contrary. WOOD & CO.

New York, March, 1, 1852. [4-2t]

Stock Horses for Sale.

THE subscriber offers for sale his Stock Horses, "Hercules" and "Royal Britain." Hercules was sired by imported Alfred, dam by imported Sampson, g. dam by Blucher, g. g. dam by Whalebone. Hercules is four years past, color dark bay, heavy built, and weighed, in September last, 1550 lbs. He was awarded, at the State Fair held at Rochester, by the Committee on Draft Horses, the *Second Prize.*

Royal Britain was sired by Mr. Dickey's Sampson; he by Mr. Robinson's imported Sampson; Mr. Dickey's Sampson's dam, by imported Emigrant; Britain's dam, by imported Performer, color dark bay, with a small white star; weighed, in September last, 1810 lbs.

HIRAM HOSMER.

Bennington, Wyoming Co., N. Y. [4-1t*]

Bone Dust.

BONE DUST, Coarse Turnings and Sawings, when taken in equal parts, price $2,25 per bbl., including package.—This article is fresh, and warranted pure, from the Empire Mills.

LONGETT & GRIFFING,
[4-2t] 25 Cliff Street, New York.

Field and Garden Seeds.

CLOVER, Large Clover, Timothy Seed, Blue Grass, Red Top, Ray Grass, White Clover, and Lucerne.

Garden Seeds—Ruta Baga, Turnep, Cabbage, Beet, Carrot, Parsnep, Peas and Beans of every variety.

Fruit and Ornamental Trees—Having been appointed agent for one of the best nurseries in the country, we are prepared to execute orders at short notice.

LONGETT & GRIFFING,
[4-2t] 25 Cliff Street, New York.

A. FROST & CO.,
GENESEE VALLEY NURSERIES.
ROCHESTER, N. Y.

THE proprietors of these Nurseries solicit the attention of Nurserymen, Orchardists, Amateurs, and others intending to plant, to their large stock of Fruit and Ornamental Trees and Shrubs, which consists of a very extensive assortment and also being much superior in quality to any that they have before offered to the public, owing to their large importations from Europe and extensive home culture. Therefore, they can with confidence assert that whatever articles may be sent from their Nurseries will give universal satisfaction, and their prices having been much reduced they desire particular notice to them.

Articles furnished from their grounds will be ascertained to cost less received in much better condition, and consequently to give better satisfaction to the purchaser, than to obtain them of travelling agents.

All communications promptly noticed.

For further description of their Fruits, Ornamental Trees and Shrubs, they refer to their *priced* descriptive catalogue, which may be obtained gratis, upon application.

Apple Trees—Strong and thrifty, 6 to 7 feet, comprising all the best varieties.

Pears—Standards of all the best sorts. Dwarf, trained as pyramids of one, two, and three, embracing over 75 of the most desirable kinds.

Cherries—5 to 7 feet, with fine heads, of 80 sorts most approved for cultivation. A quantity of an extra size can be furnished.

Peaches—of all the best sorts. Some extra size trees on hand.

Plums, Apricots, Nectarines, &c.—A fine collection.

Gooseberries—A large stock of superior plants, embracing 80 sorts of the best Lancashire varieties, best adapted for our climate.

Currants—Their collection of fine plants, and choice sorts of this valuable garden fruit, cannot be excelled—as follows: Cherry, May's Victoria, Red Grape, White Grape, Black Naples, Black English, White and Red Dutch.

Raspberries—Fastolff, Red and White Antwerp, Large Fruited, Monthly, and others.

Strawberries—of 15 best sorts.

Grapes—the native sorts—Isabella, Catawba, and Clinton.

Ornamental Trees—European Horse Chestnuts, Mountain Ash, Weeping Willow, and an assortment of our native trees. American Weeping Willow, a new variety, very beautiful and distinct; English Weeping Ash; Golden twigged do.; Weeping Limes; European Larch; and others.

Ornamental Flowering Shrubs, &c.—Crataegus and Hibiscus in variety, Cydonia Japonica, Spiræa Douglasii and Prunifolia, Daphne Mezereum, Crataegus Pyracantha, Euonymus Americana, Wegelia Rosea, Tree Paeonies 18 in. to 2 ft., and Purple Magnolias 4 ft.

Evergreen Trees, Shrubs, &c.—Norway Spruce, Balsam Fir, Pinus Sylvestris and Austriaca, English and Irish Yews, Tree Box, and the Dwarf, for edging, Deodar Cedars 2 ft., Lebanon Cedars 2 ft., Cryptomeria Japonica 2 ft., Araucaria Imbricata 15 in., Forsythia Viridissima, Mahonia Aquifolia, and Magnolias which are very fine.

Standard Roses, 5 feet, and *Dwarf Roses* of the newest and best sorts, comprising Hybrid Perpetuals, Mosses, Bourbons, Teas, and Noisettes.

They will issue soon a catalogue of bedding plants, embracing a collection of new Dahlias, Verbenas, Petunias, Heliotropes, Fuchsias, Cinerarias, Antirrhinums, named sorts of Pansies, Salvias, Shrubby Calceolarias, Penstemons, and other valuable bedding plants that have just been imported.

The Dahlias embrace all the sorts of merit that appeared at the great Dahlia Show in England last season, which they have procured at a great expense.

April, 1852.

Peas! Peas!!

WE are now receiving by the first boat from Canada—

1,000 bushels pure White Field Peas, such as Golden Vine, Creeper, White Canada, etc.
500 bushels White Marrowfat.
100 " Black Eyed do.
100 " Blue Prussian.
200 " Early Washington.
100 " Early Frame.
100 " Early Warwick.

Farmers who want good Peas at low prices, will please call at the Genesee Seed Store and Agricultural Warehouse, 63 and 65 Buffalo st. J. RAPALJE & CO.

April, 1852.

NEW AND FINE SHRUBS AND PLANTS.

ELLWANGER & BARRY, Proprietors of the Mount Hope Nurseries, Rochester, N. Y., solicit the attention of those interested in Ornamental Plants to their large stock of rare and beautiful Shrubs and Plants, among which are the following:

HARDY SHRUBS.

Deutzia Scabra, or Garland Deutzia, a fine white flowering shrub.

Forsythia Viridissima.

Ribes Gordoni—Gordon's Currant—yellow and crimson, very fine.

Spiræa Prunifolia flore pleno—small, double, white flowers in great profusion; fine dense habit.

Spiræa Lanceolata, or Reevesi, one of the finest of the genus.

Spiræa Chamædrifolia, *Niconderti*, *Lindleyana*, *Japonica*, and twenty others.

Syringa (Philadelphus) *Pubescens*, *Zepherii*, *Cordata*, *Double*, *Columbiana*, and others, all fine.

Lonicera Ledibouri—a fine Californian shrub.

Tamarix, *Africana*, *Germanica*, *Gallica*, and *Lebanotica.*

Viburnum Lantanoides, a beautiful shrub.

Wiegela Rosea—the finest hardy shrub, lately introduced from China.

The above excellent things can be furnished in quantities, at low prices.

SELECT GREEN-HOUSE AND BEDDING PLANTS.

Fuchsias.—Our collection is one of the best in America. The most distinct and best varieties yet introduced and quite rare, such as *Pearl of England*, *Fair Rosamond*, *Serratifolia*, *Serratifolia multiflora*, *Fulgens Corymbiflora*, *Corymbiflora Alba*, *Magnificent*, *President*, *President Porcher*, *Spectabilis*, &c., are propagated largely.

Verbenas.—A collection of fifty varieties, comprising everything fine introduced to this time.

Heliotropes.—*Souvenir de Liege*, *Corymbosum*, and some new varieties just received and to be announced hereafter.

Plumbago Larpentæ.

Cupheas.—*Platycentra*, *Stringulosa*, and others. The first is one of the finest bedding plants.

Lantanas.—*Ewingi*, the fine new Cincinnati variety, rose and straw color; *Mutabilis Major*, and several others.

Bouvardias.—*Triphylla*, and others.

Abutilons.

Salvias.—*Splendens Major*, *Oppositifolia*, *Aurea*, and others—superb plants for masses.

Fabiana Imbricata.

Hydrangeas.—*Hortensis*, *Japonica*, *Cordata*, *&c.*

Buddlea Lindleyana—a fine shrubby plant with large clusters of purplish lilac flowers; blooms in the autumn.

Habrothamnus Elegans—a superb plant, half shrubby, with large clusters of showy crimson flowers; blooms equally well in the open ground in autumn, and in the house in winter.

Petunias.—A large collection, embracing all distinct and good sorts.

Lobelia fulgens insignis, Lobelia fulgens alba—flowers of dazzling beauty—both new.

Veronica Lindleyana—a charming autumn flowering plant; long elegant spikes of pale (nearly white) blossoms. *Veronica Andersoni*—finest of all—*new.*

Tree Violets—white and purple.

Chrysanthemums.—A fine collection of the novel and beautiful pompone or dwarf varieties.

Dahlias.—A superb collection, including the English and French prize sorts of 1851—all at very low rates.

Cinerarias.—A fine collection of new and beautiful sorts, including *Magnificent*, *Attilla*, *David Copperfield*, *Wellington*, *Beauty of Newington*, *&c. &c.*

All the above articles furnished in large or small quantities, at low rates, and packed so as to go any distance with safety.

Priced Catalogues of Dahlias, &c. &c., ready 1st of March.
March 1, 1852.

York County Farm for Sale.

ANY gentleman wishing to remove South, can be accommodated with a good Farm of 250 acres, about 70 acres open, level, abundance of marl, orchard and small dwelling, very healthy, and good water. The residue is well set in Pine, Oak, and Chestnut, and one mile from a bold creek. Any gentleman wishing to purchase, will communicate with the subscriber. EDWARD R. COKE,
Feb. 1852.—2-2t* Burnt Ordinary, James City Co., Va.

HIGHLAND NURSERIES, NEWBURGH, N.Y.

A. SAUL & CO. have the pleasure to announce to their patrons, and the public in general, that their stock of Fruit and Ornamental Trees, which they offer for sale the coming spring, is of the very best quality, and embraces everything in their line that can be procured in the trade.

Dealers and planters of trees on a large scale, will be treated with on as liberal terms as can be done by any establishment of *reputation* in the country. They flatter themselves that for correctness of nomenclature of fruits, (which is a serious consideration to planters) that their stock is as nearly perfect as it possibly can be, having been all propagated on their own grounds, from undoubted sources, under the personal supervision of Mr. Saul. They have propagated in large quantities all the leading standard varieties, which are proved to be best adapted for general cultivation, especially those recommended by the American Pomological Congress at its several sessions, as well as all novelties of recent introduction, and kinds particularly suited to certain localities, and sections of the Union and Canadas.

Their stock of Pear Trees is the largest they have ever had to offer for sale, and among the largest in the country, and consists of over 50,000 saleable trees.

The stock of Apple Trees is also very large, as well as Plums, Cherries, Apricots, Peaches, Quinces and Nectarines. Also, Grape Vines, Gooseberries, Currants, Raspberries, Strawberries, &c., &c.

Pears on Quince, Cherry on Mahaleb, and Apple on Paradise stocks, for pyramids and dwarfs for garden culture, and of which there is a choice assortment of the kinds which succeed best on those stocks.

DECIDUOUS AND EVERGREEN ORNAMENTAL TREES AND SHRUBS.

Embracing all the known kinds suitable for street planting, of *extra size*; also, the more rare and select, as well as all the well known kinds suitable for Arboretums, Lawn and Door-yard planting, &c., including Weeping Trees, Vines, Garden and Climbing Roses in great variety. Hybrid Perpetuals, Hybrid China, Hybrid Bourbons, Hybrid Damasks, Hybrid Provence, and Bourbon, Tea, China and Noisette, and Prairie, and other Climbing Roses.

A large quantity of Arbor Vitæ for Screens, Buckthorn, Osage Orange, and other hedge plants.

The above will be sold on as liberal terms as similar stock can be purchased elsewhere. For further particulars see catalogues, a new edition of which is just issued, and will be forwarded to all post-paid applicants by mail. A liberal discount will be made to purchasers who buy to sell again, and extensive planters on their own account.

P. S.—Freight paid to New York.
Newburgh, March 1, 1852. [3-2t]

Fruit and Ornamental Trees.

ELLWANGER & BARRY beg to remind those who intend to plant next spring, that their stock of Standard Fruit Trees for orchards, Dwarf Fruit Trees for gardens, Ornamental Trees for streets, parks, gardens, and pleasure grounds, Shrubs, Roses, &c., is very large, and offers great inducements to those who desire first rate articles.

A complete Descriptive Catalogue is sent gratis to all who apply post-paid and send stamps for postage, which must now be pre-paid—5 cts. for 500 miles or under: 10 cts. over 500 miles and below 1000. A Wholesale Catalogue also furnished.

☞ See advertisement of Shrubs, &c., &c.
Mount Hope Nurseries, Rochester, N. Y., March 1, 1852.

Fruit Trees.

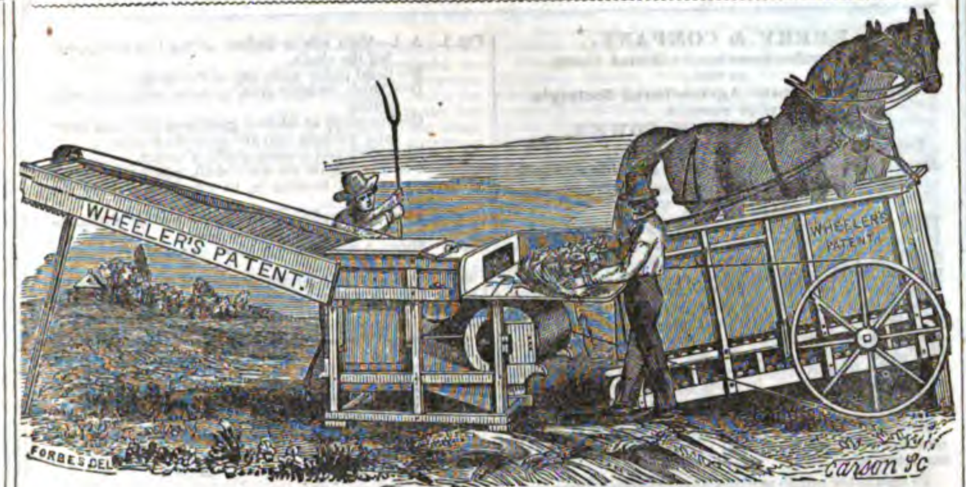
I AGAIN offer a large stock of Trees—about 100,000—of fine thrifty growth, composed in part of Apple, Pear, Peach, Cherry, &c.; together with an assortment of Green-House Plants suitable for bedding out—all of which are offered at extremely low prices.

Wholesale prices of Apple Trees will be from $9 to $10 per 100.

I would recommend to buyers, after examining other nurseries, to inspect mine before purchasing.
CHARLES POWIS.
Greece, Ridge Plank Road, N. Y., March 1, 1852.—3-3t.

Osage Orange for Hedges.

WE can furnish any number of fine yearling plants at $1.50 per 100, or $10 per 1000, or at $8 where 3000 or more are taken. Orders should be sent early. It takes about 33 plants to the rod, planted either in single rows at six inches apart, or in double rows a foot apart—either of which makes a good hedge. ELLWANGER & BARRY.
Rochester, N. Y., Jan., 1852.



New York State Agricultural Works,

ALBANY, N. Y.,

BY WHEELER, MELICK & CO.

THE subscribers are this season enabled to offer to Farmers, a new and most valuable and useful Machine. The successful combination of a WINNOWER with our Overshot Thresher proves another of its great advantages. The Winnower is attached with much less Geering than in the Undershot Machines, rendering it much more durable and compact, and more easily propelled. It has now been fairly tested, (a large number having been in constant use during the past Threshing season,) and has already in some instances superceded the most approved of the other kinds of Winnowers, the owners of which have thrown them aside after a thorough trial of ours. We have numerous commendatory letters from gentlemen who have purchased and used our Winnower, and we give extracts from a few of them.

Extract from a Letter of WM. OSBORN, Esq., *of Waterville, N. Y.*

Messrs. WHEELER, MELICK & Co.—*Gentlemen*:—My Uncle wishes me to say to you that his Winnower more than answered his expectations. My own opinion may be gathered from the fact that I want one as soon as you can forward it. It is unquestionably the most perfect thing ever got up for Threshing and Cleaning. I have considerable acquaintance with labor-saving Agricultural Machines, and I never yet saw anything which for its simplicity and perfect adaptation to the wants of Farmers, compared with your Machine.

From E. FRENCH, Esq., *Bridgeport, N. Y.*

Messrs. WHEELER, MELICK & Co.—*Gentlemen*:—If you could see the admiration your Winnower receives from all, you could not help feeling proud of it. You may expect several orders from here next season. My neighbors are scrambling for their turn to have me do their threshing, but will not employ other machines although they go about begging for work.

From J. GLENDENNING, Esq., *Newport, R. I.*

Messrs. WHEELER, MELICK & Co.—*Gentlemen*:—I am pleased to say that the Thresher and Winnower exceed my most sanguine expectations. I can get through 350 to 400 bushels of Oats per day.

From H. J. CREWELL, Esq., *Columbia, N. Y.*

Messrs. WHEELER, MELICK & Co.—*Gentlemen*:—The Thresher and Winnower you sent proves to be beyond my expectations. I have the pleasure of writing to you for one more, if you can furnish it within the next 3 or 4 weeks.

We might add many more equally flattering testimonials.

Price of Double Power with Thresher and Winnower,	$225

The superiority of WHEELER'S PATENT RAILWAY CHAIN HORSE POWER, and OVERSHOT THRESHER and SEPARATOR is universally acknowledged wherever they have been tested. Thousands of them are in use, many of which have threshed from 50,000 to 100,000 bushels of grain, and are still in good condition. They are beyond doubt the most durable and economical machine in use.—Their capacity has been tested by repeated trials as well at the New York and Pennsylvania Fairs, as on several private occasious, in competition with another Machine made in this city which has been advertised to be far superior to ours, and in every instance the result has been about *one-third*, and in some instances more, in favor of our Machines. In every case except one where we have submitted our Machine to a *working* test at Fairs, it has taken the highest premiums, and in that excepted case the Committee decided that our machine performed its work in 8 minutes and its competitor in 11¾ minutes, being nearly one-third in favor of ours.

We have also exhibited ours in competition with the same machine at the State Fairs in Ohio, Michigan and Pennsylvania and also at the Provincial Fair of Upper Canada, at all of which we received the highest premiums, viz.: In Ohio, a Silver Medal and Diploma; in Michigan, $20; in Pennsylvania, $10; and in Canada, a Diploma.

We have numerous similar testimonials from County Societies, where we have always received the highest premiums awarded to Chain Powers.

Price of One Horse Power, Thresher, Separator and Belting,	$120
Two Horse Do.,	145

Besides the above, we manufacture and keep constantly on hand among other articles, Clover Hullers Straw and Stalk Cutters, Portable Saw Mills, (adapted to Horse Powers,) and Single Powers with Churn Geer attached. These last are extensively used in large Dairies, and are so arranged that the Power is used at pleasure for either threshing, churning, wood sawing, or other purposes.

☞ All machines made and sold by us are *warranted to give satisfaction* or they may be returned, after a reasonable time for trial.

Orders are solicited and will be promptly filled.

WHEELER, MELICK & CO.

Corners of Hamilton, Liberty and Pruyn Streets,
(Near the Steamboat Landing,) Albany, N. Y.
April, 1852.

The Subscribers have obtained from Messrs. Wheeler, Melick & Co., of Albany, the exclusive sale and general agency in Rochester and Western New York, of their celebrated Agricultural Machines, which we will sell at their Albany prices, adding transportation.

J. RAPALJE & CO.

Albany Tile Works,

No. 60 Lancaster St., West of Medical College.

THE subscriber has now on hand, and is prepared to furnish to Agriculturists, Horse-Shoe and Sole Tile, for land drainage, of the most approved patterns. They are over 1 foot in length, 2¾ to 4½ inches calibre, from $12 to $18 per 1000 pieces—being the cheapest and most durable article used. Orders from a distance will receive prompt attention. [4-6t] JOHN GOTT, JR.

EMERY & COMPANY,

Sole Manufacturers for the United States,
OF THE
New York State Agricultural Society's
FIRST PREMIUM

RAILROAD HORSE POWER,

Patented by H. L. EMERY, February 24, 1852.
Manufactory on Hamilton, Liberty and Union Streets;
Warehouse and Sale Room, 369 and 371 Broadway,
ALBANY, N. Y.

THE above Horse Powers have been awarded the highest Premiums at the Fairs of the New York State Agricultural Society in 1850, and again in 1851; also, the highest Premium at the Michigan State Fair, at Detroit, in September, 1851, where a majority of the Committee owned and were using Wheeler's Powers on their farms, having purchased them previous to seeing our own; also a Gold Medal at the American Institute in 1851. It was also exhibited at the State Fairs of Ohio, Maryland, and Pennsylvania, and received the highest awards which could be given by the rules of their Societies. In every case, it has been in competition with all endless chain Powers of any note in this country.

Over SIX HUNDRED setts of the above Powers were sold and put in use from June to January last, not one being returned or failed.

To enable the public to distinguish the above Horse Power from all others, we here show its principle, and most important, parts, by diagrams and references—beside like diagrams and references of the Rack and Pinion Power, as made by ourselves, Wheeler's and others; and also the Rack and Pinion with epicycloydal teeth, which has long been successfully used in this vicinity, and which, with our recent improvements, in its adaptation and application to our Horse Power machinery places it the first on the list of Rack and Pinion Powers.

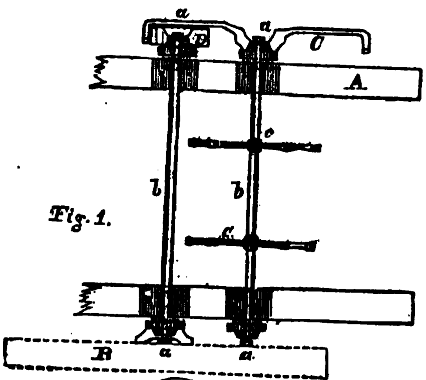


Fig. 1.

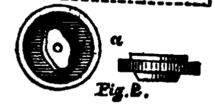


Fig. 2.

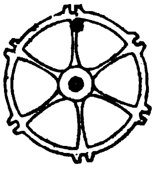


FIG. 4.

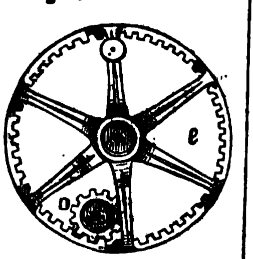
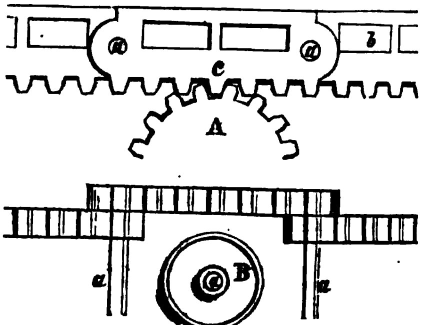


FIG. 3.

Top view of the Running Geer, and a portion of the frame work of H. L. EMERY'S Patent Changeable Railroad Horse Power.

Fig. 1. A A—Main sills or timbers of the Power supporting the shafts.
B—Band pulley upon one of the shafts.
D—Pinion, or small geer, upon the same shaft with pulley.
C—Converge or internal geer upon the main shaft, and working into and over the pinion.
b b—Main and counter shafts of power.
c c—Reels upon the main shaft, which support the endless flooring in its circuit, and carry the shaft.
a a a a—Couplings upon the ends of the shafts, fitting all the pullies and geers.
Fig. 2. Shows a side and edge view (enlarged) of the couplings.
Fig. 3. Side view of converge or internal geer and pinion.
Fig. 4. Side view of one of the two reels, c c, on the main shaft.

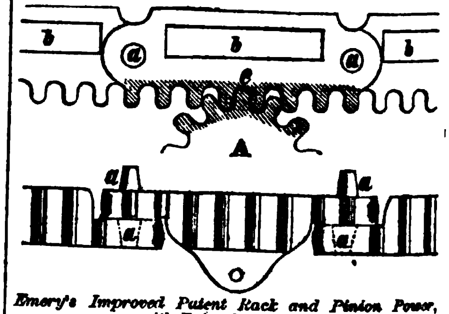


Common Rack and Pinion Power, as manufactured by ourselves, Wheelers and others.

B—Side view of one of the 72, (or 36 on each side,) small truck or friction wheels, which traverse with the endless flooring—being about 3¾ inches diameter.

C—Side view of one of the 72 (or 36 on each side,) links or segments of the chain, each of which are six inches long, as seen connected with others. a a a a—The eyes of the links and small rods crossing the power and extending through the links, and far enough outside to receive the small trucks.

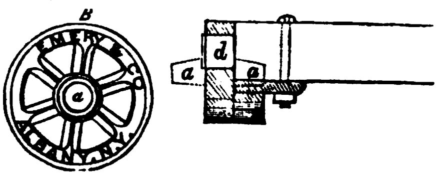
A—Side view of a section of one of the pinions or small cog wheels, two of which are placed upon the main shaft, and receive the motion and force from the cogs on the links of the chain. This pinion is about 4½ inches in diameter, and the band pulley is used upon the same shaft, which for threshing, is four feet diameter. The lower view represents the teeth or cogs, as seen with links inverted.



Emery's Improved Patent Rack and Pinion Power, with Epicycloydal teeth.

o—Shows a side view of one of the links or sections of the chain, of which there are but sixty, or thirty on a side, and are each seven inches long; every alternate link is cast with dowels, a a a a a, projecting each side; those on the inside connecting with other links, while those on the outside receive the truck wheels, thus avoiding the necessity of the small shafts, and expense of fitting up. The eyes of the links and truck wheels are cast upon steel chills—making a perfect, and hard smooth surface, which will not wear or break—while the dowels are sufficiently large and strong to withstand more than the cogs themselves.

The lower edge of each link is widened equal to the face of the pinion, and the cogs made to extend the whole width of the pinion, as shown in the lower cut. representing the link inverted, presenting double the strength and driving surface, as shown in the last kind; every alternate link is confined to the plank flooring by a small screw bolt passing through a flange upon the inside of the link, and under the plank itself.



A—Shows a section of the pinion, which is a little larger in diameter than the last—the teeth of which are epicycloydal in form—as are those on the links working into them—which is acknowledged by all mechanics and engineers to be the strongest and most perfect form of teeth, and works with less friction and wear, as the driving surfaces present to each other a rolling, instead of sliding friction; this kind of teeth, on account of their rounded form, work much deeper into each other, and have little or no inclination to lift out of geer.

The last cut shows the construction of the truck wheels, which are 1¼ inches larger in diameter, and revolve on larger circles at the ends of the power—giving them an advantage over the smaller wheels. A section of a link is shown with the end of the flooring attached; these planks are all one inch wider, and consequently wear up by use much closer, before bending or breaking under the weight of the animals. As a Rack and Pinion Power, the latter has every advantage over the common kinds in use; is manufactured at a less cost; is equally strong and durable, and is more easily handled, as its weight is some two hundred pounds less.

Either of the above kinds of Powers are offered to the public, each upon its own merits, with a full warranty as to workmanship, materials and operation, (and with a guarantee of right of using in all parts of the United States,). subject to be returned within three months—and purchase money refunded. For prices, &c., see Illustrated Catalogue, furnished gratis on application, or by mail.

The first on the list is the highest in cost, and is found preferable in all cases, and under all circumstances. The power of the revolving platform being applied to the main shaft, by means of reels with larger diameters than the pinions used in the Rack and Pinion powers, the stress upon the several parts is in no way as great—and the liability of wear or breakage, from use or accident, is removed. The whole of the geering consists of less than one-seventh the number of cogs in the Rack and Pinion Power; and these are wholly removed from under the horses to the outside of the power—free from dirt, dust, &c., and always easily kept in order or cleaned, which is an advantage over all Rack and Pinion Powers. This Power has also the advantage of the changing of force and velocity to accommodate it to any variety of work, without any additional cost or danger to the geering or other parts. When the main shaft runs but fifty-six revolutions per minute, the diameters of the geers are such as to increase or decrease the velocity to two hundred and twenty-four, or as slow as fourteen revolutions per minute, when the animals (either horses or oxen) walk but two miles per hour—being about two-thirds the travel which is necessary with the Rack and Pinion Powers, to produce the same effect. This last fact is one of its principal features, and one of the greatest importance to the farmer. The geering, as well as pullies and couplings, all agree, and can instantly be transposed—each to each, and side to side. In this power the centers of motion of the geers are always in the same position to each other—requiring no guard or binding track over the chain above the pinions, to keep the geers together, as is absolutely necessary with all rack powers, and which serve to check the force of the power; and as the driving faces of the teeth on the rack and pinions become worn off, the loss of force increases, until they eventually stop, break, or slip by each other. The length of the sections or links of the chain, as also the width of the planks of the flooring, are same as in the improved Rack Power last described. With the above advantages, together with the epicycloydal form of teeth, adopted this season in its construction, the superiority of this power is readily seen.

This Power is admirably adapted for driving Threshing Machines, Circular Saws, Cotton Gins, as also Machine Shops, Elevators, Ferry-boats, Discharging and Loading vessels, Pile-driving, Cross-cut sawing, Pumping. Grinding grain, Churning butter, Cutting hay and stalks, Shelling corn, Grinding apples, &c. The angle of elevation necessary to operate this power, is never greater, but often less than either of the others here described, and which is inside of 1¼ inches to the foot, with horses weighing 1000 pounds each, and without any harness. It has also an admirable arrangement for adjusting and tightening the chain, *not possessed by either of the others*—together with an improved brake for stopping the whole instantly—all within the power, and independent of the band and pullies, and does not require to be changed, when geers and pullies may be. The pulley used for threshing, with this power, is but three feet diameter, to effect the same as a four foot wheel does with the Rack and Pinion Power.

In all cases the shafting of all machinery manufactured by us is made to run in Babbetted Boxes, they being the most durable and perfect box in use—and not generally used by other manufacturers.

April, 1852.

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April, 1852. J. DELAFIELD.

Prices of Agricultural Products at the Principal Markets in the United States. — Mar. 18, 1852.

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Philadelphia.	
Beef, per 100 lbs.....	$5.25 a	6.50	$6.00 a	7.50	$4.50 a	5.00	$4.00 a	4.25			$4.25 a	5.75
do mess, per bbl..	9.50	12.50	10.00	12.00	11.00	11.50					14.50	15.00
Pork, per 100 lbs....					6.00	6.25	4.00	4.12½				
do mess, per bbl.	16.25	16.75	16.00	18.00	15.00	15.50	16.00	16.50	$14.50		16.50	17.00
Lard, per lb.........	9	9½	9½	10	8	10	7½ -	8	6½ a	8¾	9½	[illegible]
Butter, do	18	23	20	25	16	18	8	10	9	16	14	16
Cheese, do	6½	7½	6	8	6	7	5	7	6½	7½		
Flour, per bbl......	4.68	6.00	4.75	5.75	4.50	5.00	3.00	4.00	3.22	3.40	4.25	5.75
Wheat, per bush....	1.10	1.15	1.00	1.25	98	1.00	50	68	61	63	92	1.02
Corn, shelled, per bu.	63	64	64	65	48	50	28	35½	25	28	61	
Rye, do	74	75	72	73	69	70			50	55	72	
Oats, do	41	49	40	43	32	38	17	20	20	21	38	
Barley, do	76	80	75		67	70			30	40		
Clover seed, do	9¾ pr. lb.		9 a 11 per lb.		4.50	5.00	12½ per lb.		6.00		5.00	5.50
Timothy seed, do	14.18 per tce.				2.00	2.50	2.25		1.50	2.25	2.75	3.25
Flax seed, do	18.00 per tce.		1.20	1.35	1.25	1.50	1.00		1.00		1.30	1.35
Hay, per ton........	14.00	16.00	18.00	15.00	8.00	12.00			8.00	11.50		
Wool, per lb........	30	44	31	46	30	40	30	40	26	35		52½
Wood, hard, per cord					4.00	4.50	3.25	5.00				

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VOLUME XIII, FOR 1852.

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P. BARRY, Conductor of Horticultural Department.

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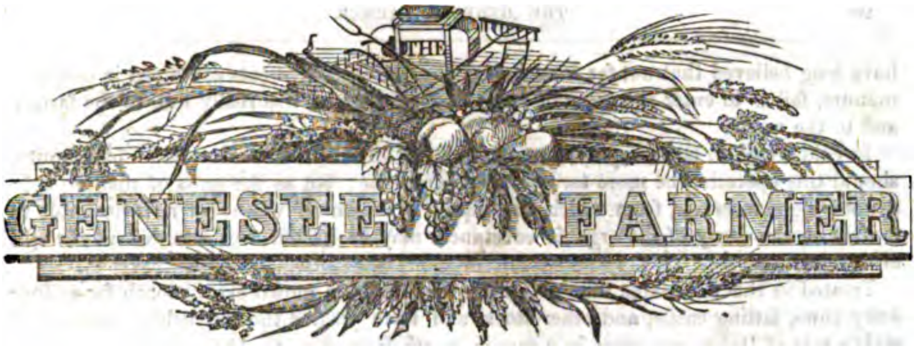

THE GENESEE FARMER

Vol. XIII. ROCHESTER, N. Y., MAY, 1852. No. V.

IRRIGATING AND MANURING LAND BY STEAM-POWER.

Results of much importance in farm economy have been realized in England by the use of steam-power to irrigate and manure both cultivated and meadow lands. Whole farms of several hundred acres have been increased four-fold in value and productiveness, with a small outlay of capital, by a little skillful agricultural engineering. It is stated, on what is regarded as reliable authority, that 112 pounds of coal will raise 715 tons of water ten feet high, which will suffice to cover seven acres of ground an inch in depth. This is equal to a steady rain of ten or twelve hours duration; and it encourages the hope that steam may soon give the farmer entire control over the most important elements of all crops. Nearly half of the solids in all plants is composed of the elements of water; and it is the medium for conveying both mineral and organic food from the soil into the cells and vessels of vegetables which have their roots in the earth. Hence, to secure a perfect command of water—removing it promptly and cheaply when in excess, and supplying it readily and economically when deficient in quantity—is a desideratum of inestimable value, if attainable. Without resorting to rivers or creeks, enough falls upon every farm and field in the course of twelve months, for all useful purposes, if the surplus at one season be stored up to meet the deficiency at another.

On one farm which has four hundred acres under artificial irrigation, the water is pumped up seventy feet before it reaches the steading or barn-yard, where all the manure is liquified by running water through it when the process of decay is going on. Water thus charged with the elements of fertility, not in excess for immediate absorption by the roots of plants, is forced by steam-power through iron pipes laid under ground that lead to every field; and from these "mains" lateral and smaller pipes are extended, upon which penstocks are raised for the attachment of long hose, not unlike those used by fire companies, from the pipes at the ends of which a perfect shower is made to rain upon the thirsty land. The nozzle of the pipe from which the jet of water issues is made quite flat, and a six-horse power engine enables a man and a boy to irrigate abundantly ten acres in as many hours. The cost of the iron pipes and hose on Mr. Kennedy's farm, (the one referred to,) was £2 10*s.*, or $12.50 an acre. For this trifling outlay in comparison with the objects attained, (the steam engine being used for other purposes,) the farm now keeps four times the stock it was capable of feeding before this system of manuring plants as they needed food, and supplying them at all times with water when thirsty, was adopted.

The reader will see that all the labor of hauling out and spreading manure is saved; while no crop ever receives more than it is able to take up and elaborate without waste. Careful experiments have shown that 100 lbs. of guano applied in this economical manner, give as good a result as 200 lbs. used in the solid form, and in the usual way. We have long believed that not far from half of the fertilizing elements contained in common manure, failed to enter the roots of cultivated plants, and was really lost to the farmer and to the world.

In cold weather, the escape steam can aid the fermentation and solution of manure, should this operation be more tardy than is desirable; but as the mass of manure is in a water-tight reservoir, from which the liquid is drawn off whenever it is desirable to remove it, the decay of the organic substances may be hastened or retarded at the will of the operator.

Treated in this admirable manner, meadows have been mown every month for soiling dairy cows, fatting cattle, and other stock, and have yielded the astonishing amount of *eighty tons* of Italian rye grass in a season, worth from 12*s.* to 13*s.* a ton. Some irrigated meadows paid £31 rent in 1850 and 1851; and hundreds of acres were let at £20, or $100 dollars per acre.

In some cases earthen pipes, something like hard burnt draining tile, but larger, thicker, and much stronger, are used for the distribution of water and manure. These cost less than half as much as iron pipes. Hose 800 yards in length has been used, so that a single penstock answered for irrigating ten acres or more. At two or three establishments the water is pumped into an elevated tank that gives a head of seventy or eighty feet upon the pipes and hose, which of course forces more water through any given aperture, and favors the spreading of the artificial shower of rain; but the force of a small engine without the head, is found to be all-sufficient to drive the liquid where-ever it is needed, as the doctors say, *pleno rivo.*

What water has accomplished in canals, and steam on railroads for transportation and travel, water and steam are about to do for the farmer on his own estate. Everybody knows that the use of steam as a motive power, is an invention of but yesterday in the history of our race. If the agricultural engineers of the largest experience, and of unquestioned science, in England, are right in their calculations to the effect that 112 lbs. of coal will elevate 715 tons of water ten feet, then it may be demonstrated that an American farmer can abundantly irrigate an acre of land *five times* in a season, by burning one-half of the cornstalks that will grow in a single crop on said acre the year previous. It is the burning of organized carbon and hydrogen in coal, wood, and other fuel, that generates heat and steam; and on good land, we know of no plant or forest tree that will organize carbon and hydrogen faster than our indigenous, unequalled maize. This organized carbon and hydrogen will be sufficient to form all needful power in the systems of working horses, oxen, and mules, and in the more durable and powerful system of a steam agricultural locomotive.

By the kindness of Dr. STANSBURG, of the Patent Office, we are in possession of a very late official report made by the London Board of Health, in which the subject of irrigation and conveying city sewerage ten miles into the country, driven through pipes by steam, is discussed and illustrated in the fullest manner. The most valuable of these illustrations we shall have engraved, and furnish our readers with all the material facts of this new application of science to agriculture. In Germany, some sixty-two square miles of soil have been made by simply driving muddy water, like that of the Missouri river, only more so, through earthen pipes, extended over a sand-desert. To illustrate the *modus operandi,* let us suppose that one has 100 acres of very poor and almost drifting sand, with a clay bank and a stream of water on one side of the tract. By plowing up this clay, and washing it with running water, a very muddy stream may be formed; and with a sufficient head, and pipes of from three to six inches aperture, 1000 tons of clay may be spread every twenty-four hours over these 100 acres of sand, by the labor of twelve horses. That water having a full head of only twenty feet will run rapidly through a six inch, or even a three inch bore, every school boy knows.

SUMMER FALLOWS.

MOST agricultural writers agree in condemning the use of the naked or summer fallow; and though many first rate practical farmers in this country and in Europe still practice and recommend it as the best means of cleaning the soil and preparing it for wheat, yet in the best farming districts of England it is altogether dispensed with, especially on the light sandy soils, the turnip crop being substituted in its place with advantage to the soil and profit to the farmer.

Turnips are sown in ridges, and kept clean by the free use of the horse-hoe; and the land is always plowed three times previous to sowing. Hence they are rightly called a *fallow* crop, and leave the land in a very clean and rich state for the subsequent grain crop.

Indian corn is *our fallow crop;* for, though it differs in very important respects as regards exhaustion of the soil, yet it is similar to the turnip in affording the opportunity of cleaning the land, admitting the employment of the horse-hoe throughout the summer months, and succeeding best on light loamy soils, or those which are generally apt to produce most weeds. Yet many good farmers, prevented by the shortness of the working season from cleaning the land as they would wish before planting, find it difficult, and in many instances impossible, to keep their soil free from weeds without the use of a summer fallow occasionally.

Though the principal object in summer fallowing is to destroy the weeds, yet other results are obtained equally desirable and beneficial. The constituents of plants generally exist in the soil in a very *insoluble* condition; and as plants will not take their food except in solution, it is a matter of great importance to the farmer not only to have the necessary elements in his soil, but to have them in that condition which is necessary for their assimilation by the plants grown. There is no better way of effecting this result than bringing as much of the soil as possible into direct contact with atmospheric air, the oxygen uniting with the organized carbon of the soil and forming carbonic acid, which exerts a powerful effect, in conjunction with water, on the insoluble mineral substances in the soil, disintegrating their important elements and so altering their chemical combination as to supply the plants with food suited to their wants. There are also noxious substances existing in many soils, especially those undrained, which oxygen renders harmless. Besides the benefit of oxygen on the *mineral* ingredients, it exerts a no less beneficial action on the *organic* matter found in all fertile soils. Thus there is great reason to believe that plants can not take the nitrogen which they contain in the form of nitrogen, but that it must be converted into ammonia or nitric acid. Now, under the influence of oxygen this conversion takes place, and it can not in any way be effected without it.

In view of these facts, the object of the farmer will be to render his soil as permeable to air as possible. Thorough under-draining is one of the grand means of doing this; and though it costs $20 to $30 per acre, yet on many farms it is a very profitable investment. Frequently plowing and stirring the land, exposing different surfaces to the atmosphere, and thoroughly pulverizing the soil, are the common means used to obtain the desired result. On stiff, heavy soils, those which exclude the atmosphere and are generally full of undecomposed organic matter and valuable though insoluble minerals, *summer fallows* are attended with surprising results, and this for the reasons assigned above; and such is the richness of many of these kinds of soils, so great is the amount of fertilizers locked up in them, that large crops may be obtained for many years without any apparent exhaustion, by simply summer fallowing them.

But on light sandy soils, which admit the atmosphere, there is no such accumulated undecomposed matter; and the only value of the summer fallow is to clean the land. To obtain good crops on such soils, it is absolutely necessary to apply some kind of manure; and to obtain this in sufficient quantities, is the great difficulty in adopting a course of rotation that will yield profitable returns and improve the soil. We cannot recommend farmers to purchase guano to apply to wheat; for though it greatly increases the crop, yet from its high price and the low price of wheat, it is not a profitable investment. It might pay to apply it to mangel wurzel, ruta baga, carrots, &c.; which being consumed on the farm by stock, would furnish much valuable manure.

Growing large crops of clover is another great means of obtaining manure, and substitutes the summer fallow. If the land is clean, there is no doubt that a much larger crop of wheat can be obtained by letting the clover grow till in full bloom, plowing it under, and cultivating once or twice before sowing, than if it had been plowed early in the spring, and summer fallowed in the best possible manner. And even if the first crop of clover is cut early for hay or green fodder, and the second growth plowed in immediately before sowing, a better crop of wheat is obtained than by summer fallowing. But where, instead of a summer fallow, land is sown to barley or oats, even though it is perfectly clean, the following wheat crop, except well manured, can not be expected to be so good as after clover or summer fallow, for the reason that barley, oats, corn, and timothy, exhaust the soil of the elements the wheat crop specially requires; whereas clover supplies them both in root and stem. Yet we have known a better crop of wheat obtained after a crop of barley, than after a pseudo summer fallow; or where land was plowed about midsummer and allowed to lie in that state a couple of months, when it would be plowed again and sown; whereas the land for barley would be plowed early, and be well dragged and rolled, and would turn up in the fall in a much better condition than if it had been summer fallowed in the above style.

If land gets very weedy, and must be summer fallowed, let it be done well and effectually. Plow it in the fall, and let it lie exposed to the mellowing influence of frost; for such is the necessity for hurry in getting in spring crops, that it can rarely be plowed early enough in the spring to make a good summer fallow. On heavy soils, which are generally fallowed for wheat, a clod-crusher something similar to *Croskill's Patent Clod-Crusher* as given in the September number of the *Farmer*, would be an implement of great use; and we are surprised some of our enterprising agricultural implement makers have not yet supplied us with one. We know of no other implement that will so readily and economically pulverize stiff soils.

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PEAS.

LAST season was unusually well adapted for the growth of peas; and wherever sown in this neighborhood, if well put in, good crops were obtained. All farmers who have been in the habit of growing peas, agree in recommending them as a crop that but slightly impoverishes the soil, and at the same time, if a good large crop is obtained, of being highly remunerative, and the land is left cleaner and in a better state for the following wheat crop than though it had been summer fallowed. We have seen several instances in which part of a field was sown to peas and the other part summer fallowed *well*, in which the wheat was a much better crop after the peas than after the summer fallow. But a large crop, one that will smother the weeds, is necessary to obtain this result.

In England they sow the large *Gray Pea*, very similar to the *Scotch Gray Pea* found in the seed stores, that is too strong for culinary purposes, but highly nutritious, and much used for feeding hogs, horses, and sheep. It is grown very extensively, and on wheat farms displaces the summer fallow. They are always sown in drills about a foot apart, and hand-hoed once or twice, to clean the land. Thirty bushels to the acre is about the average yield. Peas are usually sown broadcast here; but we think if they were drilled with our grain drills, about twelve inches apart, and hoed, they would well pay for the labor by the extra yield, besides leaving the land in so much better condition.

The value of peas, compared with other commonly cultivated grains, will be seen from the following table:

Description of grain.	Water.	Dry substance.	Nitrogen.	Gross Mineral matter.	Phosphoric acid.	Alkalies, (potash and soda.)
Linseed,	12	88	3.75	4.25	1.60	1.10
Peas,	16	84	4.00	2.50	0.80	1.10
Wheat,	16	84	1.80	1.60	0.75	0.50
Oats,	16	84	2.00	3.00	0.50	0.50
Barley	16	84	1.60	2.50	0.75	0.66
Indian Corn,	8	92	1.00	1.84	0.70	0.25

The amount of nitrogen, other things being equal, represents the relative nutritive value of different foods; so that we see 100 lbs. of peas worth four times as much as Indian corn. But we cannot bring ourselves to such a conclusion without direct experiments; and these have not yet been made. But, one thing is proved; that the amount of nitrogen in the food, without reference to any other circumstance, represents the true value of the manure made by the animals consuming it. Thus, then, the manure made by hogs feeding on peas would be worth four times as much as though they were fed on corn, and two and a half times as much as though fed on barley. And when we remember that this large amount of nitrogen is obtained from the atmosphere, and that in the production of the starch in corn, wheat, barley, &c., considerable nitrogen is consumed, and that our soils are very deficient of nitrogen, no argument will be needed to show that peas are as profitable a crop as the farmer can raise. They do best on a clover sod that is clean and full of roots. They should be sown early, but will do if sown the first or second week in May. Two and a half to three bushels per acre is usually sown. If soaked for six hours previous to sowing, they are soon up and get the start of the weeds.

It may be considered a slovenly practice of harvesting, but is nevertheless adopted by a first rate farmer of our acquaintance, who grows several acres of peas every year. He takes a common roll wooden hay rake, takes out the two outside teeth, and with a good stout horse, pulls them up by the roots, and leaves them in wads of a convenient size for turning, pitching, &c. In this way he can do fifteen acres a day. If there are any left on the land unpulled after he has harvested the others, he turns in the hogs, who soon clean up every pea. He considers them the best food in the world for hogs. The pork, too, is of a very superior quality, and does not lose so much when made into bacon.

Pea straw, if well harvested, is very excellent food for cattle and sheep, and is very valuable for manure.

In Canada, oats are often sown with peas; and ripening at the same time, they are cut, threshed, and ground together, making an excellent food for hogs and horses. The oats furnish a good support for the pea. But where wheat is to follow, we would not recommend this course.

The ravages of the *pea-bug* is a sad drawback on the culture of the pea. Early in summer, when the peas are in flower and forming pods, the female beetle deposits an egg in almost every pea. When matured, the pea does not appear injured; but on close examination, we can discover in each a minute black speck, which is the *larva*. Dr. HARRIS says: "The eggs are laid only during the night, or in cloudy weather. Each egg is placed opposite the pea, and the holes through which they pass are so fine as scarcely to be seen, and are soon closed." The larva remains in the pea all winter, gradually consuming its internal substance, and in spring it is transformed into a perfect insect, pierces the skin, and emerges to depost its eggs in the new pods. The larva has a soft, whitish body; and a head small, scaly, and armed with strong and sharp cutting mandibles. The maggot, when it reaches maturity, gnaws a circular hole to the husk or skin of the pea, and even cuts round the inner surface which covers the aperture; so

that, when changed to a beetle, by a slight dilation of its body it forces off the lid, and emerges the new-born *Bruchus*, as represented in the figure. In many of the peas the insect will be found dead. Whether this arises from a lower temperature than they are accustomed to, not invigorating them sufficiently to leave their habitations, or whether they return to feed when they can not make their escape readily, which is the case when the peas are confined in sacks, or heaped up in a warehouse, has not been determined.

The vitality of the seed is not usually destroyed, as the egg is deposited in the side of the pea, where the insect when hatched emerges, leaving the germ uninjured. It is doubtful, however, whether the plants raised from such peas are as strong and healthy as those from perfect seed; and they should not be used for seed when it can be avoided.

This insect, though common in all the older States, is almost wholly unknown in Canada, owing perhaps to its not being able to withstand the severity of a Canadian winter. Hence thousands of bushels of peas are annually brought from Canada to the United States, for seed.

Remedies and Preventives.—Late sowing has often proved a successful preventive against the ravages of the pea-bug. If sown the last of May, or first of June, the peas will not blossom or form their pods until after the beetles have disappeared. But peas sown so late often suffer from drouth, and rarely yield a very abundant crop. It is recommended in *Hovey's Magazine* to subject the peas, immediately after they are gathered to the action of boiling water for *one minute;* by this means the larvæ are destroyed, which are at this time just below the integuments of the pea, without affecting the vitality of the seeds. If the peas remain in the boiling water *four minutes*, most of them will be killed. To kiln-dry the peas at a heat of 130 to 140 degrees, will answer the same purpose, and does not destroy the germ. When they are intended for culinary purposes, some such means should be taken to destroy the larvæ.

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INTERESTING EXPERIMENT.—In a recent lecture, Mr. NESBIT, Principal of the Agricultural and Scientific Academy, Kensington, London, said:

> "A curious circumstance connected with the growth of clover is, that by cutting the clover twice and removing all the hay, a much better wheat crop is obtained than by feeding it off by sheep, even if some artificial food is used. This is owing to the fact that the growth of the roots of clover in the land is in exact proportion to the growth of the leaves in the air. Each leaflet that shoots upward sends a radicle or rootlet downward. *If the leaflet be bitten off or destroyed, its radicle ceases to grow.* It therefore follows that grazing clover by sheep materially diminishes the amount of vegetable matter accumulated in the soil by the roots, and consequently the produce of the succeeding crop."

The above views are somewhat theoretical, but not improbable. They are sustained by the following experiment:

> "A friend of mine in Northamptonshire had a field of clover; it was divided into two portions; both were cut at midsummer, and one part was then fed off with sheep, and the other left to grow till September, when it was again cut and the hay removed. Equal portions of the several pieces were then compared. Where the clover had been cut once and fed off, he got 85 cwt. of clover roots per acre. Where he cut twice, he got 75 cwt.; there being a difference of two tons of vegetable matter per acre."

If further experiments shall confirm the correctness of the above, it will lead to the mowing of all clover fields, whether the crop cut is fed green or as hay. In wheat culture, a good supply of clover roots to decay and enrich the soil is important. Indeed, it is probable that the close pruning of plants by feeding animals, greatly diminishes the yield of forage in the aggregate.

BUTTER AND CHEESE MAKING.

MILK is composed principally of three substances—curd or casein, butter, and sugar of milk, held in solution by some 87 per cent. of water. The casein is what chemists call a *nitrogenous* compound, and is precisely similar in composition to white of egg, pure flesh, the gluten of wheat, &c. The butter and sugar, when pure, contain no nitrogen, and correspond in composition with fat, starch, and other *carbonaceous* compounds.

Butter exists in milk as *oily globules enclosed by a film of casein*, which being specifically lighter than the milk, gradually rise to the surface when allowed to stand. With these globules, or cream, arises a portion of the sugar of milk; so that in the cream we have the butter and a small amount of casein and sugar. This sugar of milk may be obtained by taking some sweet whey and heating it slightly, adding at the same time a little white of egg. This will precipitate all the curd and butter, which must be removed by filtering through a fine cloth. The whey will be clear and free from all impurities. If it is now poured into an earthen vessel, and placed in a cool place, in a few days small crystals will settle on the sides and bottom of the vessel. These are *sugar of milk*. This sugar may be preserved dry or in solution for a great length of time. But if into a solution there be placed a little curd or rennet, a chemical action immediately takes place, and the sugar is converted into *lactic acid*. The same acid is produced in the fermentation of brewers' grains, cabbage, (*Sauer Kraut*,) and in a number of familiar instances. If the fermentation be allowed to proceed, carbonic acid is given off, and alcohol is formed precisely as in the fermentation of cane and grape sugar.

Now, in the cream we have this sugar of milk in solution in conjunction with curd, the very condition essential to the formation of lactic acid; and we accordingly find that at the proper temperature for fermentation, (from 60 to 120 deg. Fahr.,) lactic acid is produced, and the cream becomes sour. When cream is heated, the oily globules appear to burst their shells and run into each other, rising to the surface in the form of melted fat. Likewise, when cream or milk is agitated for a length of time by mechanical means, the temperature is increased, the films enclosing the globules are broken, and the fatty matter runs together in the form of small grains, and finally into lumps of ordinary butter. The facility with which this is accomplished appears to be greatly promoted by the presence of the lactic acid, since it never takes place without becoming slightly sour during the process, even though the cream is sweet when put into the churn. It is always advisable to have the cream sour before churning, as much less labor is required, and more butter obtained than when churned sweet. In cold weather it is often necessary to place the cream in a warm place before the fermentation of the sugar will take place; in other words, before it will sour.

As the result of many experiments, it is now proved that cream should not be warmer than 55 deg. Fahr. when placed in the churn, nor more than 65 deg. when the butter comes. This temperature produces the greatest quantity and best quality of butter. The cream always increases in temperature from 5 to 10 deg. during churning.

The composition of butter differs very much, according to the manner in which it is obtained, the kind of cows, quality of food, and time of year. It consists generally of about 84 per cent. of the fat of milk, or pure butter, and 16 per cent. of water, sugar of milk, and casein; the latter in very small proportion, yet sufficient to produce great changes in the butter, unless means are taken to counteract its transforming influence. We have seen, that in contact with casein, sugar of milk is changed into lactic acid. In butter, therefore, the sugar soon changes into this acid. But that is not all: under the influence of the air, and in connection with butter, further decompositions take place, and *butyric* acid is produced, which imparts a very disagreeable odor and taste to the butter. If allowed still further to decompose, *capric* and *caproic* acids are produced;

and it is to the presence of these three acids, in a greater or less proportion, that the rancidity of butter is owing. The cause, therefore, of butter becoming rancid, is the presence of the nitrogenous compound, casein. The prevention is attained only by considerable trouble and care.

Saturated solutions of saline and other substances are found to arrest this tendency to decomposition. Among them is common salt, which is most generally used for this purpose. It should be as free from all impurities as possible, especially the salts of lime and magnesia, which are found to give the butter a bitter and otherwise disagreeable flavor. These salts, being soluble in less water than common salt, may be got rid of by pouring about a quart of hot water on eight or ten pounds of salt, stirring it well for a short time, and then straining it through a fine cloth. The impurities will go off in the liquor, which may be given to stock, &c., and the salt in the bag can be dried and kept for butter-making purposes.

When the butter is taken from the churn, it is usual either to wash it till it imparts no color to the water, or to press out the buttermilk by kneading and pressing, using no water at all. Both methods have their advocates, and both have certain advantages over the other. The washing doubtless removes most of the casein and sugar of milk, and is, we think, decidedly the best practice. All the water that is left in the butter, be it more or less, must be *saturated with salt;* that is, must have dissolved as much as it is capable of taking up: so that it is necessary to free the butter from all the water possible, or else it will be too salt. We insist particularly on this point, because it is proved by experience that butter, however good it may be when packed, will not keep if there is any water, or buttermilk, or curd, that is not well saturated with salt. It is also necessary to exclude the atmosphere as much as possible from the butter, its oxygen greatly facilitating decomposition.

Of the great necessity of cleanliness in every operation connected with the dairy, it is unnecessary to remark, further than that cream is remarkable for the rapidity with which it absorbs different gases; so that great care should be taken to keep the dairy clean, and close all apertures through which any offensive gases might enter.

The chemical changes that take place in the manufacture of cheese, are very similar in their nature to those just described in our remarks on butter-making, and can easily be understood.

When milk is first drawn from the cow, it is always *alkaline*, in consequence of the soda contained in it. If to a portion of this milk vinegar or any other acid be added, the milk is immediately curdled. When in this state, if a little soda or potash is added, sufficient to make the mixture slightly alkaline, the curd disappears, and the milk is restored to its original state. The reason for these changes is, that curd is insoluble in pure water, or in water containing an acid; but is soluble in water containing an alkali —soda, potash, or ammonia. Now, milk contains soda, which unites with the curd, rendering it soluble; but when an acid is applied, it unites with this soda, neutralizing its alkaline properties, and the curd is left in an insoluble condition, or is precipitated. When milk is kept for any length of time at a temperature favorable for fermentation, a chemical change takes place—the sugar of milk, under the influence of the casein, is transformed into lactic acid, which unites with the soda, taking it away from the curd, and thus leaving it in an insoluble state, or precipitates it in the same manner as though vinegar or some acid had been added.

The various processes of cheese-making are only different modes of *hastening* this decomposition of the sugar into lactic acid, and arresting it at the proper time. The one generally adopted in this country—using the prepared stomach of the calf or hog—is doubtless the best method at present known. Of the action of rennet, there is much ignorance, and consequently much diversity of opinion. From the fact that gastric juice will immediately curdle milk, it was very reasonable to suppose that the action of rennet was caused by gastric juice retained in the stomach. This opinion, however, is not sustained by any facts but what apply with equal force to the theory we have adopted, while there are many inconsistent with it. The gastric juice is often entirely removed by well washing the stomach several times in water, and afterwards soaking it in a saturated solution of salt and water for several months, after which it is sometimes washed, and then salted and dried for use. By this process the gastric juice could not possibly be retained in the rennet. Were it the gastric juice, it is but reasonable to suppose that the fresh stomach would be stronger and better than the ones thus prepared and kept for a length of time. But this is not so, rennet not being considered fit for use till at least twelve months old; and though it will do earlier, yet much more is required to "set the cheese." Does the gastric juice increase in quantity or in quality by keeping? or must we look for another theory?

It will be remembered that we said, that if to a solution of pure sugar of milk, that would not of itself undergo decomposition, a little curd or rennet was added, the sugar was gradually converted into lactic acid. Now, in milk, this curd is present in conjunction with the sugar, and the change will of itself gradually take place; but it is desired to accelerate it, and accordingly rennet, which is *a soluble highly nitrogenous ferment* that can easily be intimately mixed with the whole of the milk, is added for this purpose. It quickly converts the sugar into lactic acid, which unites with the soda, forming a neutral salt, (lactate of soda,) and the curd is left in an insoluble state.

The reason for raising the temperature of the milk, is to assist the rennet and lactic acid, and also, when the curd is precipitated, of condensing its particles by coagulation, rendering them more easy of separation from the whey. The proper temperature at which the rennet should be added to the milk, is about 95 deg. Fahr., experience proving this to produce the best quality of cheese. In making skim cheese, however, the milk should be set a little cooler, otherwise the curd is apt to be tough and sour. There are various ways of heating the milk to the proper temperature. In a small dairy it may be done by placing a tin of milk in boiling water, and when it is hot, pouring it into the cheese vat. In a large dairy, a boiler should be so constructed as to be surrounded with water, similar to an ordinary glue pot. This would prevent the possibility of injury from overheating, &c. It would be very advantageous not to heat any portion of the milk hotter than 95 deg., but in some way increase the whole of the milk to that temperature; but we know of no method of doing this, though probably some of our ingenious dairymen will hit on one ere long that will cheaply accomplish the object by means of steam passing through a worm placed round the cheese vat. The objection to heating a portion of the milk to a high temperature, is that the butter it contains runs together in an oily mass, which is very apt to get pressed out of the cheese when afterwards subjected to a high and necessary pressure.

We have said that butter exists in milk in the form of globules encased with a shell of curd. When the curd is rendered insoluble by the formation of lactic acid, these globules combine more or less with the curd, and are intimately mixed with it. We are not acquainted with any experiments that have been tried as to the relative amount of butter left in the whey after the curd has been removed, by different processes, at different temperatures, &c. It is, however, well known that in the making of cheese from new or unskimmed milk, considerable butter is left in the whey, which in many parts of Europe is obtained by placing the whey in large vessels for a day or two, when cream will rise to the surface, which is taken off and churned. Much labor is required in churning, but considerable butter is obtained, having a peculiar sweet and cheesy taste, arising from the large amount of curd and sugar of milk which it contains. It must be used fresh, as it is next to impossible to keep it, for the above reason. In England, where it is called "whey butter," it sells for about 30 per cent. less than the best milk-cream butter.

The great difference in the quality of cheese made in different districts, is doubtless owing more to the processes of manufacture, than to the kind of cows and the nature and quality of food. The kind and quantity of rennet, the temperature at which it is added, the quality and quantity of salt, and the manner in which it is applied, the pressure to which it is subjected, and the temperature of the drying-room, all materially affect the quality of the cheese. We prefer salting the curd as soon as it has been pressed a little, and a great part of the whey removed. It should be crumbled up as fine as possible, and the salt (which should be free from impurities,) be mixed as intimately as possible. All the whey and water in the cheese must be saturated with salt. Hence it is that a large cheese, from the greater difficulty of pressing out the whey, requires more salt proportionably than a small one.

It is necessary to continue the cheese under the press as long as it will wet the cloth surrounding it, which must be removed and replaced by a dry one. The cheese should be kept in the dairy, or other cool place, for some time before it is removed to the drying-room. While in the green state, it is sometimes covered with salt for a short time.

The reason of cheese swelling, or being huffed, is owing to adding too much rennet, or rennet that is too strong, being too much decomposed. Leaving whey in, or any animal fluid, will produce the same effect. Salt may be added in sufficient quantity to counteract its decomposing influence, but the cheese in this case will be hard and unpalatable.

The drying-room should be dark, but well ventilated. The cheeses must not touch each other, and should be turned often, especially when green, or they will mould on the side next the floor. It is customary to grease the cheeses repeatedly during drying. It is said to improve the appearance of the cheese, preventing its cracking, &c.

One of our lady subscribers informs us that the cheese fly is a great trouble to dairy farmers, especially at the west; and that *a strong decoction of Sweet Elder*, rubbed on with the butter, keeps the flies away, and at the same time improves the flavor and color of the cheese.

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FARMING IN KENTUCKY.—In soliciting subscribers, I am frequently met with the objection that your paper is not adapted to our system of farming, and that those articles upon the subject of manuring and making manure, which frequently appear in your columns, are not at all practicable in Kentucky. And this is true. But we have a system of farming, which is necessary to keep our lands in the most fertile condition; yet there is nothing done the *primary* object of which is to make manure in the barnyard or manure-heap; but we have adopted a system of rotation in crops, and by this means our lands are kept up. I would suggest to you the propriety of securing a Kentucky contributor, to answer this objection. ELI M. KENNEDY.

No system of rotation enabling the farmer to keep his land in good heart and obtain good crops, can be condemned; yet we are unable to conceive such a system without in some way or other returning a portion of the elements which plants contain, in the shape of manure or green crops. It is a proposition as true in agriculture as in domestic economy—"Always taking out of the meal tub, and never putting in, soon comes to the bottom." What we contend for is, that the annual exportation, in the form of cotton, tobacco, wheat, corn, &c., of phosphate of lime, potash, soda, and other elements which exist in the soil only in small quantities, *must ultimately impoverish the soil;* and that, though by plowing in clover, &c., the crops are greatly increased, yet if these large crops are all exported from the farm, such a system can not long be adopted without seriously injuring the soil. What we advise is, not that large crops should not be grown in any way possible, but that care be taken in time to restore, in the form of manure, those important elements which are so essential and at the same time so liable to be exhausted by a thoughtless, wasteful system of culture.

We should be glad to hear from our friend how the farmers manage their lands, obtaining good crops without manure, or in *some way* furnishing the necessary elements in a proper state for assimilation by the plants.

Communications and Editorial Notes.

UNDER the above head we give a number of letters, with editorial notes, some of them received just as we were going to press, and requiring answers previous to the issue of our June number.

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LICE ON CATTLE.—We have received several inquiries as to the best means to get rid of lice on cattle. Grease or oil will kill them, buttermilk or whey they do not like, and fine sand thrown over the animal removes them. A decoction of cedar bark or tobacco is also recommended by some, and Scotch snuff by others.

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(A Subscriber, Montgomery City, Pa.) GUANO.—Previous to sowing, the guano should be passed through a seive, to take out all the lumps, which must be broken fine, till they will pass through the seive. Unless this is done, the lumps destroy all vegetation where they fall. It should never be placed contiguous to seed, but should be well mixed with the soil near it. In using it for corn, it is convenient to sow it just as the corn is up, and cover it with the hoe. If, however, it could be sown and mixed with the soil in the hill previous to planting, we should prefer it, as it then gives the corn a better start. From 200 to 400 lbs. per acre may be sown. It will increase the crop considerably, but whether sufficiently to pay for the application at the present price of guano and corn, we do not know, though we are afraid it will not. Please send us the result of the application.

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BOG LIME.—I have an acre and a half of bog lime, or shell marl, and I would much like to know its value and the proper method of using it to the best advantage. I find, when burned, it forms a substance white as chalk. Now, if you, or any of your readers, can inform me whether it is prudent to use it as a fertilizer in its crude state, or whether it must undergo some certain process before using, I shall be much obliged. J. A. G.—*Hillsdale.*

It is impossible to judge correctly of its value, without some knowledge of its chemical composition. Is there much organic matter driven away in burning? Does the white substance left as ash effervesce on the addition of vinegar? If so, it is probably chalk; but there may be alkalies and phosphates united with it that would make a very valuable manure. We would use some in the crude and some in the burnt state, before making extensive application of it.

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MANURE DROPPED IN SUMMER.—Will you give information through your valuable paper, respecting the use of manure dropped in the yard or otherwhere. I pick it up in the morning, and immediately cover it with loam or some other material that takes up the moisture, so that it will not escape into the atmosphere. I wish to know which is the best mode of using it. Shall I haul it out in the fall, and plow it under; or heap it up till spring, and then plow under? A SUBSCRIBER.

In the fermentation of dung, there is given off water, carbonic acid, and carbonate of ammonia. The loss of water, of course, is of no consequence, and if the manure is used for wheat or corn, the carbonic acid is of little value. But the carbonate of ammonia *is the grand fertilizer* for all our cereal grain crops, and it is particularly needed on all wheat farms. If this is retained in the manure, the more it is fermented the better, as there is then less bulk to cart, spread, and plow under, and the mineral elements are probably rendered in a better state for assimilation by the process of decomposition. To retain the ammonia is the great difficulty; for as it is much lighter than atmospheric air, it is very prone to take to itself wings and fly away, leaving the manure a comparatively worthless mass. The heap should never be suffered to get hotter than blood heat; and then if it is covered with loam or other absorbent substance, and is not drenched with rains and the rain water from the buildings, most of the ammonia, and soluble phosphates, and alkalies will be retained, which will act quick, and would therefore be most beneficial if applied to spring crops.

Stall Feeding Sheep.—Will you inform your readers what is the best mode of stall feeding sheep, so as to fatten them readily? Some six weeks ago, I shut up some, and fed them with shelled corn, ground corn, and good hay, as much as they would eat; and I believe they grow poorer every day. A young Farmer.—*Napoleon, Mich.*

Nothing is so good to fatten sheep as oilcake or peas and beans and good clover hay. A good sheep, weighing about 150 lbs., will eat about 3 lbs. of clover, and 1 lb. of oilcake per day, and increase about 2¼ lbs. per week. A few roots, either of ruta baga or mangel wurzel, are of great benefit. Corn is not so good to fat sheep as oats or barley. But oilcake and peas are best, not only because they fatten quickest, but leave much the most valuable manure. See the article on Peas in this number.

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To Dissolve Bones.—As you give subscribers the liberty to ask questions, I wish to ask how many pounds of potash will it take to dissolve one bushel of bones, that they may be mixed with other substances and applied to root crops in the hill? or can it be done by strong lye? or what is the best and cheapest way to apply bones to the soil? We have no bone mill in these parts. Lott Parsons.—*South Amherst, Ohio.*

Make a strong lye, as in soap making; then boil bones in it till they fall to a powder—the lye consuming the gelatin. We cannot give the exact relation that a pound of potash bears to a pound of bones. This is one of the many things that an experimental farm would teach; but we are nearly discouraged in trying to get such an institution started in the United States. Anything designed to increase our knowledge of rural economy, in a common sense practical way, is successfully opposed.

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Superphosphate of Lime and Mangel Wurzel.—Can you inform me if the Shaker seed marked "Mangel Wurzel or Sugar Beet," is the kind you recommend in the March number? Where can the superphosphate of lime, of good quality, be obtained; and what is the price? Silas H. Meacham.—*Richland, N. Y.*

The sugar beet and mangel wurzel are different roots, and seed of either can be obtained from any respectable seedsman. The superphosphate of lime is being manufactured by the New Jersey Zinc Company, and is for sale in New York City at 2¼ cts. per lb. We think superphosphate of lime is an excellent manure for root crops, and were in hopes it could have been manufactured at a price sufficiently low for its profitable use as a manure. It can be purchased in England for $35 per ton, and an article manufactured from Coprolites, or a mineral phosphate of lime, is sold for $24 per ton of 2240 lbs.

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Treatment of Sandy Soils.—Having much confidence in the correctness of your opinion upon agricultural matters, I write to you for advice in regard to the treatment of a sandy soil, which, at a depth varying from five to eight inches, is underlaid with a mixture of sand and iron, usually hard, but sometimes in a pulverized state. This subsoil is sometimes of a very dark color, and sometimes of a reddish hue. Shall I turn this subsoil to the surface, loosen it with a subsoil plow, or let it be as it is? Would it pay to apply lime at fifty cents per bushel? This land, if treated with twenty-five or thirty loads of compost, two-thirds swamp muck and the rest stable manure, would yield from twenty-five to thirty-five bushels of corn. H.—*Valley Farm, N. H.*

A very little of the subsoil may be brought to the surface and incorporated with the sandy surface soil. It will hardly pay to give fifty cents a bushel for lime to apply to land; but a little may be mixed with swamp muck to sweeten it before manure is added to it in forming compost heaps. Ashes may also be used to correct the sourness of muck, or other vegetable matter.

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Sweet Potatoes.—I made an attempt, last summer, and succeeded in raising a reasonably good crop of sweet potatoes, but failed entirely in keeping them through the winter. I packed them in dry wheat chaff, and put them where they did not freeze. I examined them about the 16th of December, and found them all rotten. If you can let me know, through your paper, or otherwise, how to keep them, you would oblige me, and perhaps others. A. H. Allebach.—*New Bethlehem, Pa.*

Condensed Correspondence.

Winter Barley.—I saw in a late number of the *Farmer*, the subject of raising barley introduced, and I believe the kind spoken of to be the spring variety. I have now growing over forty acres of the winter variety, which looks well. In the fall of 1850 I procured three and a half bushels of seed from Ohio, which I sowed on two acres of land, and the yield was 140 bushels, or 70 bushels per acre, of a very superior article, weighing 52 lbs. per bushel, sealed measure. I have sown nearly ninety bushels, or about two bushels per acre, and the balance sold readily for one dollar per bushel. I hope to exhibit a sample at your State Fair this year. B. S.—*Logansport, Ind.*

Grubs on Melon Vines.—Year before last I was greatly annoyed by a grub that for several weeks made a deadly onset upon my melon vines; and after resorting to almost every stratagem that I could hear of to keep them away and preserve my vines, I finally resolved upon an extreme course, as I thought. So I went to a kettle where soap had been recently made; the kettle not being covered, rain water had fallen in it, and the stench arising from it was very offensive. The sediment was composed of bone dust, the bones having been boiled in lye till they were reduced very fine. After saturating the hills thoroughly with this sediment several times, I was not annoyed by the worms after. But that was not all the good resulting from it, for it acted like a charm on the vines, and it was never my fortune to raise such a fine crop of melons before from such a small number of vines. J. D. C.—*Locke, N. Y.*

Recipe for curing Sores.—Take two and a half drams of blue vitriol, four drams of alum, and six drams of loaf sugar; or, we will say, blue vitriol the size of a walnut, alum a size larger, and sugar the size of a hen's egg. Pulverize, and turn into a glass bottle. Add one pint of good vinegar, and one table-spoonful of honey. Cork, and shake the mixture three or four times a day; and when dissolved, it is fit for use.

This wash will remove film from horses' eyes; will cure king's evil and most kinds of fever sores; will destroy proud flesh, and cause the sore to heal. It is great for hoof-rot in sheep, and may be applied to any sore with safety. The sore should be kept clean, and washed twice a day with the mixture, till completely healed. For the eyes it may be diluted with soft water one-half, but should in all cases be used as strong as the patient can bear. For hoof-rot in sheep, add as much gunpowder as vitriol; pare away all the affected part of the hoof, wash freely every few days, turn the sheep into a fresh pasture, and you have a cure. R. R.—*Center Lisle, N. Y.*

Potato Culture.—If convenient, break the sod in the fall; if not, as early in the spring as possible. Spread a good coat of old manure, and plow it in; let the turf lie fifteen or twenty days; if rough, roll and cultivate it well; and plant as early as the weather will permit. I always cut my potatoes. Have planted them in drills and in hills—three or four setts in a hill. As soon as four leaves are seen, I always go through them with a cultivator, and stir the earth at every sett. When six inches high, I go over them in the same way; and again when one foot high. I go through them twice in each row with a plow. I give them a good, but a flat hill. In July my potatoes are fit to dig. I plow the soil in narrow lands, not more than three rows on a land, with a good furrow between kept well hoed out. I have raised potatoes in this place for nineteen years, and have never had the rot or bugs injure them. This I think is because I plant so early—generally in March. I think that potatoes are struck with the disease by an east wind; I have found that where they were planted on the west or south side of a hill, they were not injured. N. L. C.—*Geneva, Ashtabula Co., Ohio.*

Virginia Land.—Three years ago I purchased a farm here of 300 acres for $3 per acre. The improvements on it consisted of a comfortable frame dwelling house and out houses. More than half the land was in woods of heavy growth of timber. Only three small fields had ever been cultivated to any extent, and there were two fields that had been cultivated for one or two years only; and yet this land had been in market five or six years, at $2.50 per acre. The owner asked me $3, and I did not hesitate a moment to give it. Last summer several thousand acres of unimproved lands, entirely in the woods, were sold to citizens of the county, old men, bred and born here, at from 10 cents to $2 per acre. Some of my neighbors who have comfortable homes, good tracts of land well inclosed, with a good proportion of river and creek bottoms, and orchards of fine fruit, &c., around them, are starting to the southwest to look for richer land! Any one of these tracts "I guess" could be bought for from $6 to $8 per acre. If they were mine, I would not take double what they ask, and what they will be obliged to take, if they "move" as they expect.

I am thus particular to mention these facts, because I observe there is an increased interest to know more about Virginia and Virginia land, and because I wish to see men of enterprize, intelligence, and industry, settling in the "Old Commonwealth." I have no other interest to advance by it, except the cause of agriculture, and a hope of one day seeing my children in the midst of a refined, civilized, and enlightened community. G. A. Walkup.—*Mt. Airy, Pittsylvania Co., Va.*

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White Beans.—You have often requested your subscribers to communicate to the *Farmer* their experience in raising different kinds of crops. I have seen no notice on the culture of the white bean, and as some farmers are turning their attention to this crop, it may be of advantage to some to know how I manage. I do this work the last week in May. I prepare my ground by plowing and dragging smooth; I mark it out in shallow furrows, about two and a half feet apart, with a corn plow; I then drop the beans two or three inches apart in this furrow. I use a drag that is wide enough to cover two rows at a time. In this way, with two hands, I can plant four acres in a day. I find this a better way than to plant in hills. When the beans are about three or four inches high, I go through them with the cultivator; weed, and hoe them well. When about ten inches high, I use the corn plow, turning the soil against the vines to hold them up. This time I use no hoe. By this process, and with a sprinkling of plaster when I hoe them, I raise from twenty to twenty-five bushels per acre. The past season I had four acres, from which I measured up ninety-one bushels. When I gather and thresh them, I save the vines to feed to my cattle. I have kept seven head this winter, and have fed but little else. *They are all in good order.* J. B. Hart.—*Candor Center, N. Y.*

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Hedges.—Much has been written about hedges in my time, by theorists; but one grain of experience with me is worth a pound of theory. Of all plants for hedging, and I have tried seven or eight varieties, I find the English Hawthorn the best. Privet is only fit for an ornamental hedge, and so with Box; Buckthorn too slow forming an effectual barrier; Hazel too tempting to boys; Holly too slow; the Rose too weak; and the Osage Orange too tender and weak for our northern latitude. The Hawthorn is hardy, and after two years' growth can support any snow that may happen to lodge on it. It is a rapid grower; adapted to most soils, but thrives best on a clay bottom. I have them three years old, an inch in diameter and ten feet high. I have them, too, on high and low land, on stiff clay, on bog, on sand, and on good loamy land; and can see but little difference.

A thorn hedge may be planted any time from the middle of October to middle of May, (provided the ground is free of frost,) in clean ground free from weeds. The land should be properly graded, and where it is low or wet, should be raised, as the thorn is not a water plant; but at the same it does not require a ditch, as in Europe. The plants should be set perfectly upright to make a good hedge, and require, under the best management, to be protected from cattle, &c., for three or four years; though I have one hedge only three years old that is fit to throw open the coming summer. I cut down either at the time of planting or one year therefrom, after which I only side trim, allowing the lowest lateral branches to extend eighteen inches from the stock, gradually narrowing to the top. This makes a stiff, close fence, that will obstruct any unruly animals.

Much has been said against the Hawthorn as a hedge plant. The reason is, that those who cavil on the point are those who have barely a theoretical knowledge of its habits. The Thorn is liable to all or most of the diseases of the apple tree, and no other. Where one thrives, there will the other thrive; and no fence is better calculated to prevent depredations on fruit trees. The Apple and Peach are subject to diseases; but should they be shunned on that account? That the Thorn may do better in some locations than in others, I do not deny; but of this I am certain, that I have seen no plant more congenial for hedges in Onondaga county, than the Hawthorn. M.—*Onondaga, N. Y.*

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Farming in Edgar County, Illinois.—If you will look at the map of Illinois, you will see that Edgar county lies on the eastern line of the State, about midway between the northern and southern boundaries. Paris is within ten miles of the State line, and eighteen of the Great Wabash river; consequently we have no nearer market than Terre Haute, Ind., twenty miles from Paris

Our principal products are corn, oats, and wheat. Corn averages about sixty bushels per acre, and is worth 15 to 18 cents per bushel at home. There are but few sales, and it is mostly fed to hogs, cattle, and horses. Oats are a good crop, averaging forty-five bushels per acre, and are worth in Paris 12½ cents per bushel. There is little demand for them. Wheat is a very uncertain crop, on account of freezing out; but last year we had a fine crop in this county. It sells at home for 40 to to 45 cents, and in Terre Haute, Ind., 50 to 55 cents per bushel. Prospects tolerably good for the coming crop. Wheat sown on clover sod, oat stubble, or prairie sod, is more certain to hit than on any other ground in this prairie country. The Mediterranian wheat does not stand the winter so well, and is more liable to rust than the smooth wheat, which yielded last year twenty bushels per acre. There is difference of opinion respecting the best quantity of seed to sow—about six pecks is perhaps the average. I think this is not sufficient, and sow one and half bushels. Corn is our staple produce, having a greater demand for it than for oats, on account of feeding out to cattle and hogs. Farmers seldom raise more wheat than they require to make bread for their own family, and oats for feeding calves and sheep. The farmer that has 200 bushels of wheat, is looked upon as a great wheat grower. As to stock, the mule, hog, and steer, is about all that is raised here. A mule two years old is worth from $60 to $65; a steer four years old, $18 to $20; and hogs are now worth 3½ cents per lb., gross, and sold here last winter, fatted, at $4.25 per hundred. Potatoes sufficient for the family's own consumption only are raised, though we have never had the potato rot in these parts. But little rye or barley is grown, no flax or hemp, and but little buckwheat, the farmers thinking it hurts the ground. For threshing wheat, we pay $5 per hundred bushels; and for oats, $3. *All cash for pay.* D. J. Conney.—*Paris, Ill.*

Large and Small Potatoes for Seed.—In some former numbers of the *Farmer* I have observed a difference of opinion in reference to the selection of potatoes for seed, some contending for large whole potatoes, some for large ones cut, and others that small ones are equally as good, if not better. Now, my own views have been, and still are, that like produces like; or, that every thing in nature brings forth after its kind; and not only after its kind, but also, as a general principle, after its quality: and in order to improve either animal or vegetable, we must propagate from the best specimens to be obtained, potatoes not excepted. This I think is a correct theory, agreeing with my experience, and corroborated by the following experiments:

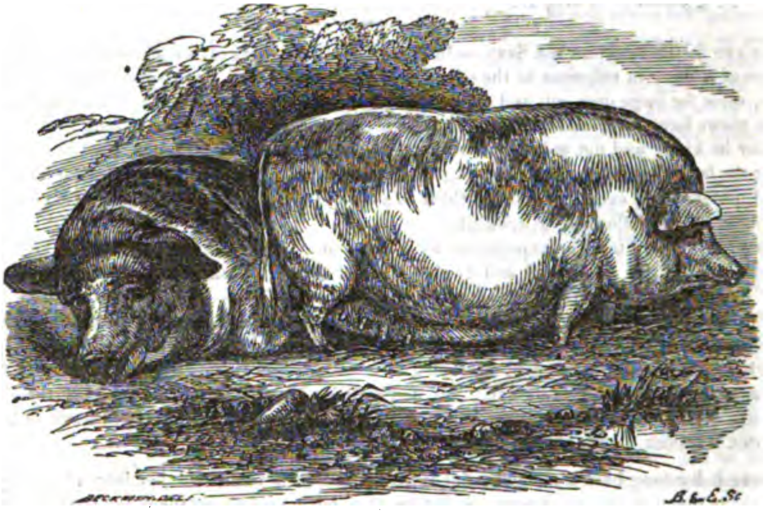
A few years since, I tried an experiment with large and small potatoes for seed. The result was nine bushels from the small seed and twelve from the large, all other things being equal. Subsequently I tried the relative value of large and small potatoes for seed, in connection with an experiment with and without plaster. I selected four rows through the field, which I planted and harvested in the following order: No. 1. Large whole potatoes, plastered; harvested seven bushels. No. 2. Large whole potatoes, not plastered; harvested four bushels and twenty-eight quarts. No. 3. Small seed, plastered; harvested five bushels. No. 4. Small seed, not plastered; harvested three bushels and twenty quarts. This, as far as my observation extends, is about the average benefit of both seed and plaster. Daniel Lott.—*Lottsville, Pa.*

I believe it has long been a mooted point among *practical* farmers, whether large or small potatoes are better for planting. Circumstances, it is true, may favor the one or the other position, according to the experience of different men. The simple theory, respecting the matter, I have never seen advanced by any writer upon the subject. The error in the reasoning lies, I think, in the assumption that the potato itself is the seed. If this were true, we might indeed think the potato a single exception to the universal law that "like begets like." But the potato is not a seed, and therefore not an exception. It is simply a root, propagated—not by reproduction, but by continuation; and the only advantage which I can conceive the large has over the small potato, is in the nutriment its greater bulk would supply to the germ. If this reason is satisfactory, we hope small potatoes may hereafter be regarded as of some value, and at least be preserved for planting in times of great scarcity. Our farmers in this quarter may be signally benefitted by practicing upon the above hint, until our potato harvests shall be more propitious. J. A. Preston.—*Hartland, Wis.*

Compost Manure.—I have about thirty acres of peat, or vegetable mold, on my farm. About five years ago I took six loads of it, mixed it with leached ashes and plaster, let it lay a year and turned it once. I applied it to grass land in very low condition. The result was, I have taken eight crops of hay in four years, and three times as much to each crop as the year previous to its application. I have used the compost in the hill with broom corn, by the side of barnyard manure, and the same quantity of ashes and plaster in each. That dressed with the compost was about a week forward of the other when the brush came out, and the seed was worth double. Hiram Root.—*Deerfield, Mass.*

CHINESE HOGS.

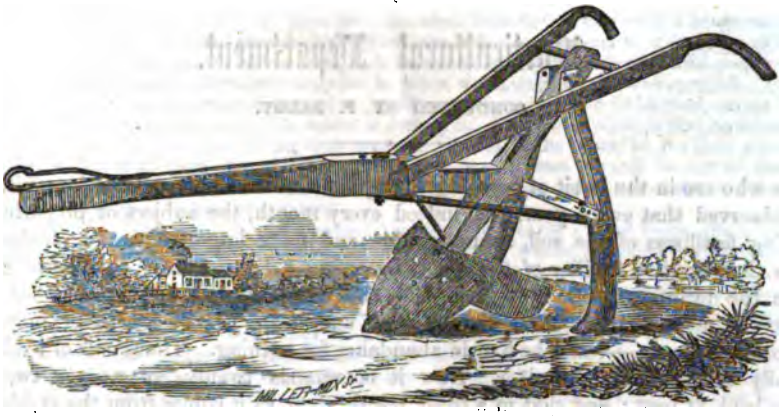
This breed of swine has long been known in Europe and America, and has done much to improve our native breeds. The celebrated Berkshire hog owes some of his best points to an intermixture with the Chinese; and it is easy to trace the distinguishing characteristics of the Chinese in all our best breeds of swine. There are some seven varieties, or at least several kinds of hogs that are called "Chinese," produced by different climates, habits, &c. The kind most generally kept in Great Britain is a small, black, short legged, quiet looking animal, with fine, small, stand up-ears; short snout; thin skin; and a round, compact, fine muscled body, with scarcely any bones, and very little hair. They are much prized on account of early maturity, the rapidity with which they lay on fat, and the small amount of offal and bones. They make first rate "porkers," but are rather too small to be much valued as "bacon" makers. But crossed with some of the larger breeds, such as the Yorkshire, a breed is obtained second to none. At the last New York State Fair, J. **Delafield**, Esq., the President, exhibited for show only, two fine specimens of this breed, a cut of which is here given. They are exceedingly prolific; one of these here delineated was suckling thirteen at the time of the Fair. It is amazing with what rapidity the little fellows grow, if well kept in a clean warm sty. We saw some at the Smithfield Cattle Show, that were apparently nothing but balls of fat, with scarcely legs, eyes, or mouth visible. It is generally admitted there, that this breed will lay on more fat from a given amount of food, than any other; and we think it will be greatly beneficial in improving our present rate of swine.



CHINESE HOGS.

We intend giving our views on the best means of fatting hogs, in a future number. During the summer they should be allowed to run in a clover field, and have access to plenty of water. They should also be fed *regularly* with the whey, butter-milk, and other wash from the house, three times a day. They ought to have plenty of food, and be half fat when put up on corn in the fall.

Mr. **Lovejoy**, of Canaan, N. Y., informs us that he killed a hog the last winter, *only nine months old*, that weighed 411 lbs. when dressed. We do not know what breed it was, but think if the Chinese hog can lay on fat much quicker than this, or at the rate of 11½ lbs. per week, it is all that we have asserted.



Wright's Premium Horse-Hoe.—The above engraving represent's Wright's Horse-Hoe, to which was awarded a premium at the last State Fair. We think this will be found a valuable implement, as we have used one somewhat similar, though apparently a poorer implement, with the operation of which we were much pleased. The inventor says it "is so arranged that it can be used between rows of any width from two to four feet apart, and can also be governed as to the depth by raising or depressing the wings or hoes. The earth can be removed from the crop when small, or hilled up in its more forward state. In other words, the operator can perform all that is necessary to insure a a good crop of corn, potatoes, &c., without the aid of hand-hoeing, provided the directions accompanying each machine are followed." For further information, see advertisement in last number.

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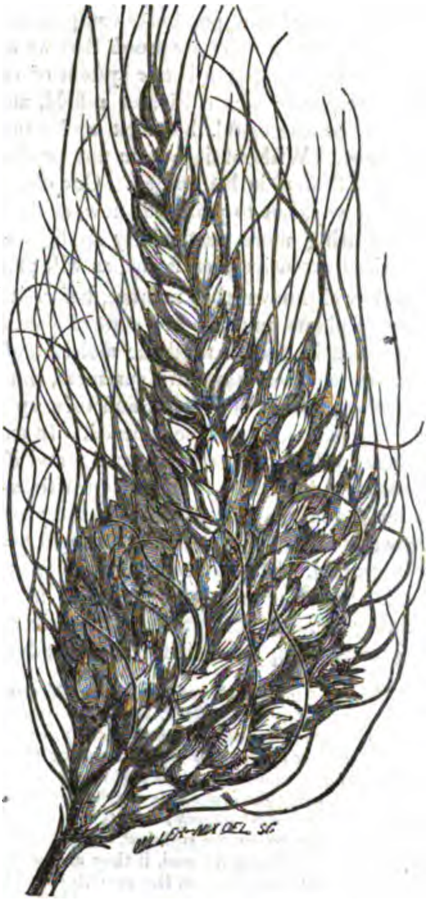
Mummy Wheat.—We give an exact drawing of a head of Mummy Wheat, furnished us by a gentleman whose name we regret that we can not state, from the circumstance that his letter was mislaid by the artist. Some samples of this variety send out several short heads, being probably the same "corn" referred to in the Bible as "seven eared." This grain is cultivated to some extent in the territory of Utah, from seed recently brought from Egypt. We have seen specimens from Utah, that had five ears or heads growing from one stem. No satisfactory evidence has come to our knowledge, of any peculiar value in Mummy wheat. As a curiosity, it is worth cultivating.



MUMMY WHEAT.

Horticultural Department.

CONDUCTED BY P. BARRY.

Those who are in the habit of perusing the agricultural and horticultural journals, must have observed that every year, and indeed every month, the subject of preparing and applying fertilizers of the soil, assumes more and more importance. In all the older States the primitive fertility of the soil is becoming exhausted, and people are finding out in the declining produce of their fields and gardens, that they must either apply manures or move further back. Twelve years ago, in the city of Rochester, manure—good stable manure—could be had in abundance for nothing. Thousands of loads were annually emptied into the river. Now it commands twenty-five cents a two-horse wagon load, at least; and that in a fresh, rough state, as it comes from the stable floor. Every year it grows dearer and scarcer, although the land has not increased, while the quantity of manure produced annually has more than quadrupled.

This shows the growing importance of manure here; and it is so in other places. Patent manure and poudrette companies, and searches after fertilizers in the bowels of the earth, are all so many proofs that we are no longer ignorant of the value of manures; and proofs, too, that a better system of culture is rapidly gaining ground. It is a fact that every man who cultivates a field, an orchard, or a garden, should remember well, that to be successful, he must understand the making as well as the application of fertilizers. Without it he can not produce a remunerating crop on his farm, nor fine fruits or flowers in his garden. Our object at this time is not to discuss the subject in a general way, but to point out now, at the commencement of the growing season, a mode of fertilizing more particularly applicable to the garden, although in other countries practiced extensively on farms, as will presently be seen.

It is well known that manure, before it is in a proper condition to be taken up by the roots of plants, must be in a state of solution. When solid barn-yard manure is applied, it remains ineffective until the moisture of the ground and rains dissolve it. But in this country we often have dry summers, during which manures often remain solid during the whole season of growth, and turn up in the autumn almost as fresh as when turned in; the plants, meantime, starved. In such a climate, it is evident that old, well decayed manure, will be the most effectual; and if in a *liquid state*, better still, in all cases where we wish a rapid and luxuriant growth, as is the case with most garden vegetables and other annual plants. It supplies the place of both rain and manure—essentials of good growth. The liquid manure tank will become an indispensable adjunct to every American garden. The subject is attracting great attention even in the rainy climate of England, and we extract the following from a late number of the *Gardener's Chronicle*, offering some important suggestions in regard to the proper mode, and proper periods in growth, of applying it to the best advantage:

> "The great importance of the *Liquid Manure* question, and the numerous inquiries made of us as to the application of this fluid, lead us once more to resume the subject, restricting ourselves on the present occasion to a single point, namely, the period in the growth of a plant when it may be most advantageously applied, or should be altogether withheld.
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> "In order to understand this part of the question, it must be borne in mind—1, that *liquid manure is an agent ready for immediate use*, its main value depending upon that quality; 2, that *its effect is to produce exuberant growth;* and 3, that *it will continue to do so as long as the temperature and light required for its action are sufficient.* These three propositions, rightly understood, point to the true principles of applying it; and, if they are kept in view, no mistakes can well be made. They render it evident that the period in the growth of a plant, at which it should be applied, depends entirely upon the nature of the plant, and the object to be gained.
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> "If, for example, *wood* and *leaves* are all that the cultivator desires to obtain, it will be evident

that liquid manure may be used freely from the time when buds first break, until it is necessary that the process of ripening the wood shall begin.' Wood can not ripen so long as it is growing; wood will continue to grow as long as leaves form, and its rate of growth will be in direct proportion to their rate of development: therefore, in order to ripen wood, growth must be arrested. But the growth of wood will not be arrested so long as liquid manure continues to be applied, except in the presence of a temperature low enough to injure or destroy it. Hence it is obvious that liquid manure must be withheld from plants grown for their wood and leaves, at the latest, by the time when two-thirds of the season shall have elapsed. To administer it in such cases towards the end of the year, would be to produce upon it an effect similar to that caused by a warm wet autumn, when even hardy trees are damaged by the earliest frost.

"In the case of *flowers*, it is to be remembered that the more leaves a plant forms, the fewer blossoms in *that season;* although perhaps the more in a succeeding season, provided exuberance is then arrested. The application of liquid manure is therefore unfavorable to the *immediate* production of flowers. It is further to be remarked, that even although flowers shall have arrived at a rudimentary state at a time when this fluid is applied, and that therefore their number can not be diminished, yet that the effect of exuberance is notoriously to cause deformity; petals become distorted, the colored parts become green, and leaves take the place of the floral organs, as we so often see with roses grown with strong, rank manure. In improving the quality of flowers, liquid manure is therefore a dangerous ingredient; nevertheless its action is most important, if it is rightly given. The true period of applying it, with a view to heighten the beauty of flowers, is undoubtedly when their buds are large enough to show that the elementary organization is completed, and therefore beyond the reach of derangement. If the floral apparatus has once taken upon itself the natural condition, no exuberance will afterwards affect it; the parts which are small will simply grow larger and acquire brighter colors; for those changes in flowers which cause monstrous development, appear to take effect only when the organs are in a nascent state—at the very moment of their birth. Hence it is clear, that in order to affect flowers advantageously by liquid manure, it should be given to plants at the time when the flower bud is formed and just about to swell more rapidly.

"With *fruit* it is different; the period of application should there be when the fruit, not the flowers, are beginning to swell. Nothing is gained by influencing the size or color of the flower of a fruit tree; what we want is to increase the size or the abundance of the fruit. If liquid manure is applied to a plant when the flowers are growing, the vigor which it communicates to them must also be communicated to the leaves; but when leaves are growing unusually fast, there is sometimes a danger that they may rob the branches of the sap required for the nutrition of the fruit; and if that happens, the latter falls off. Here, then, is a source of danger which must not be lost sight of. No doubt, the proper time for using liquid manure is when the fruit is beginning to swell, and has acquired, by means of its own green surface, a power of suction capable of opposing that of the leaves. At that time liquid manure may be applied freely, and continued, from time to time, as long as the fruit is growing. But, at the first sign of ripening, or even earlier, it should be wholly withheld. The ripening process consists in certain changes which the constituents of the fruit and surrounding leaves undergo; it is a new elaboration, which can only be interfered with by the continual introduction of crude matters, such as liquid manure will supply. We all know that when ripening has once begun, even water spoils the quality of fruit, although it augments the size; as is sufficiently shown by the strawberries prepared for the London market, by daily irrigation. Great additional size is obtained, but it is at the expense of flavor; and any injury which mere water may produce, will certainly not be diminished by water holding ammoniacal and saline substances in solution.

"*Root crops* stand in a different position to any of the foregoing. They are most analogous to the first of the above cases; for their roots may be compared to wood, of which they are equivalents. But there is this important difference, that whereas the quantity of wood is in direct proportion to the quantity of leaves, the reverse is the case with root crops. The turnip that throws up an enormous tuft of leaves, has a very small bulb; and so of the carrot. In these plants the root is formed by the leaves; but only when they themselves cease growing vigorously. The true object is to obtain plenty of foliage early enough to afford time for the after formation of the root. This is what happens under ordinary circumstances. The leaves grow rapidly during the warm weather of early autumn; but when the temperature falls, their own development is languid, and all their energy is expended in augmenting the mass below them. We entertain little doubt that by the constant application of liquid manure, a turnip might be absolutely prevented from forming more root than a cabbage. In root crops, what is wanted is an abundant supply of liquid manure when the leaves are forming, so as to secure early a large and vigorous foliage; after which no liquid manure whatever ought to be applied. This is quite consistent with the evidence collected by Mr. DUDLEY FORTESQUE, and published in the Minutes of the Board of Health, to which we have so often of late had occasion to refer. Speaking of Mr. KENNEDY's farm in Ayrshire, this gentleman says: 'Of the turnips, one lot of *Swedes* dressed with 10 tons of solid farm manure, and about 2000 gallons of the liquid, having six bushels of dissolved bones along with it, *was ready for hoeing ten or twelve days earlier* than another lot dressed with double the amount of solid manure without the liquid application, and were fully equal to those in a neighbor's field which had received 30 loads of farm-yard dung, together with 3 cwt. of guano and 16 bushels of bones per acre. The yield was estimated at 40 tons the Scotch acre, and their great luxuriance seemed to me to justify the expectation. From one field of *White Globe* turnips, sown later, and *manured solely with liquid*, from 40 to 50 tons to the Scotch acre were expected. A field of carrots reated in the same manner as the *Swedes*, to which a second application of liquid was given *just before thinning*, promises from 26 to 25 tons the acre.'

"Such we believe to be the principles that should regulate the periods of growth at which liquid manure ought to be given to plants. Those principles are founded upon what appear to be the natural requirements of vegetation—are consistent with all at present known of the subject; and seem to account satisfactorily for many of the failures that are said to have attended the application of this agent. Let us add, however, that they are fair subjects of discussion, and will be all the better understood if subjected to rational criticism. We should therefore be happy to receive the opinions of any correspondents whose *experience* enables them to coincide with, or to differ from us, in this most important matter.

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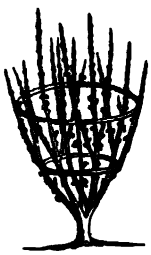
Dwarf Apple Trees.—The dwarf apple tree is now very generally taking the place of the standard, in all tasteful, well managed fruit gardens. A standard apple, covering 30 feet square in a garden, is nothing short of an absurdity; while nothing can be imagined more interesting than the pretty dwarf bushes planted along the borders of a walk, at four or five feet distance. In our treatise, "The Fruit Garden," we have pointed out several eligible forms for these trees, and the modes of producing them; and would now suggest to the tasteful amateur, the vase or goblet form, as represented in the annexed cut. We have given in the "Fruit Garden," pages 233, 234, a detail of this mode of training the peach; and the same principles will apply to the apple: but the latter is much more easily managed, on account of its less vigorous growth. The proceeding is, to commence the head with three or four leading branches. These are kept open in the middle by means of a hoop, and summer pinching is applied to prevent the growth of shoots inside or out. The leading shoots are annually shortened, to produce a sufficient supply of fruit spurs or branches on their lower parts, and to obtain secondary branches, to fill up the spaces that widen as the growth proceeds upward. If summer pinching be not properly applied, there will be a difficulty in having a great deal of wood to cut away at the spring pruning, and consequently a continual production of wood without fruit.



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Memoranda of the Season.—Our unusually severe winter cast its cold and gloomy shadow over the whole of March and a considerable portion of April, greatly retarding the ordinary labors of the garden and orchard. Now, on the 17th of April, people here just begin to move in the matters of tree planting and gardening, and everything wears the appearance of March. But we must not complain; for everything looks and promises well. Winter has not been more than usually injurious to vegetation; and we think less so, on the whole, than its predecessor, which was remarkably mild. The ground thawed about the 15th of March; we had then a few fine days, and commenced raising trees in the nursery; but on the 20th it froze hard again, and remained so for a week or ten days. It again thawed, and on the 5th of April we had snow to the depth of six inches. This disappeared rapidly, and we have since had open but cold, showery weather. For a week past it has been rather pleasant; lawns are assuming somewhat of a spring verdure; crocuses are finely in bloom in the garden; buds are swelling fast; and multitudes of laborers, worn out by almost six months' absence of employment, are enjoying the privilege to labor. Never have we seen so many men actually desperate in search of work; it is almost impossible to refuse them. The business of planting trees and improving gardens goes forward in all parts of the country with increased zeal; on all sides we have the most abundant evidences of it.

The publishers of this journal, with a view to promote the taste for floriculture, offered to those of the wives or daughters of subscribers who would apply for them, a package of flower seeds; and we believe over 5,000 applications have been made. Hundreds of these applications are charming little essays on flowers, and would, if printed and bound together, make an interesting volume—one that would show that the wives and daughters of American farmers are behind none others in their appreciation of the beautiful in nature, and moreover possess a degree of intelligence surpassing that of the same class in any other country. These letters have surprized us, and give us great hopes for the future of American horticulture.

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FRUIT CULTURE IN INDIANA.

We take the following pomological items from a friendly and familiar letter received from a correspondent at Versailles, Indiana. The experience of observing, practical men, gleaned in this way, is valuable; and we beg our friends in other quarters, who desire to promote the interests of pomology, to favor us in the same way. We omit the name of our correspondent, as the letter appears not to be intended for the public.

> I have been trying for some years to establish an orchard of first rate fruit, but find it a more difficult task than I had expected. I consulted the works of Kenrick and Downing, and have been much disappointed in many of the varieties recommended by them. For example: *Prince's Harvest* is a good apple, but so unproductive as to render the trees mere cumberers of the ground. *Red Astrachan* has nothing to recommend it but good looks. The same may be said of the *Summer Queen*. *Summer Pearmain* of Cox is a good apple, but with me as yet has proved a shy bearer. *Porter* is a good bearer on young trees, but has too much acid. We have an apple here ripening at the same time with the *Porter*, which is far better; we call it the *Wine* apple. It is red, and first rate in every way. Does your *Pomme Royal*, or *Dyer*, ripen in advance of the *Porter*? (1) If it does, I would like to get some grafts. The best early apple which I have tested, is the *Carolina June*. (2) I have not seen it noticed in the eastern catalogues, nor do I think it has ever been exhibited at Cincinnati. It is a red apple, conical in form, very handsome, a great and constant bearer, and comes into bearing very early. It ripens nearly at the same time as *Prince's Harvest*. I sent some grafts of this to yourself and partner, by mail, a few winters since, and hope you will soon test its merits in your locality. I believe you were from home at the time.
>
> I have tested many varieties of winter apples, and find but few which I consider first rate. These are—*Golden Russet*, *Prior's Red*, *White Bellflower*, *Newtown Pippin*, and *Rawles Janet*, or *Genneting*. I am planting *Norton's Melon* and *Northern Spy*, but have never seen the fruit of either variety. I hope to prove the *Spy* in a year or two.
>
> The best pears which I have tested are *Julienne*, *Dearborn's Seedling*, *Bartlett*, *Seckel*, *Washington*, and *White Doyenne*. This last is the best of all. I have never seen what I would call a good winter pear. The *Passe Colmar* is the best; but it has a great fault—namely, dropping most of its fruit before gathering time. Have you ever seen the *Lawrence*; and if so, what do you think of it?
>
> My orchard stands on high ground; surface rolling; subsoil stiff yellow clay, retentive of moisture, and based on blue limestone. Will such a state of things suit the *Northern Spy*? (3) It does not suit the *Baldwin*; it takes dry rot in specks; but I have raised it sound and fine, after manuring with lime and ashes.

(1) It begins to ripen earlier, but continues nearly as long in use.

(2) We have seen specimens of this variety grown at Kalamazoo, Mich., and believe it valuable, especially for the west. It resembles the *Summer Queen*—a little more conical, and deeper red.

(3) We cannot answer this, as we do not remember to have seen it grown on such soil.

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Horticultural Society of Pittsburg.—The following gentlemen are elected officers of this Society for the ensuing year: John Chislett, President; John Murdock, Jr., Vice President; A. Hersperger, Treasurer; Henry Woods, Secretary; A. Campbell, A. B. McQuewan, James Windkop, John Lowen, C. L. Goehring, Chas. Lockhart, T. J. Bigham, James Murdock, James McKain, W. H. Williams, W. P. Marshall, and S. N. Wickersham, Executive Ccommittee.

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Horticultural Society of the Valley of the Genesee.—The officers of this Society for the present year are as follows: P. Barry, of Rochester, President. Mathew G. Warner, of Rochester; John J. Thomas, of Macedon; Henry P. Norton, of Brockport; R. G. Pardee, of Palmyra; and John Donnellan, of Greece; Vice Presidents. Leander Wetherell, of Rochester, Corresponding Secretary. Joseph A. Eastman, of Rochester, Recording Secretary. James H. Watts, of Rochester, Treasurer.

GRAPE VINE MALADY.

BY W. B. LE COUTEULX, OF BLACK ROCK, N. Y.

THE disease described in the following Report, which I translate, has made its appearance upon my imported vines this year for the first time, particularly upon the *Chasselas;* but my *Isabella* vines have also suffered more or less from the effects of it. All my vines are planted in espaliers, and not in a hot-house, all to the south or east; and these last suffered less than the first. All the new limbs have black spots, and no doubt will have to be cut.

"REPORT MADE TO THE CENTRAL AGRICULTURAL SOCIETY OF PARIS, FRANCE, UPON THE MALADY WHICH NOW EXISTS UPON GRAPE VINES.—This malady upon the grape vine appeared for the first time in England in 1845. It was well observed and described by a gardener from Margate, Mr. TUCKER. But in England, as in all countries which are cold and foggy, the vine being cultivated only in hot-houses, heated by steam, can produce but a forced grape of inferior quality; still much valued by their inhabitants, unable to procure any other. One was apt to think that this disease having taken place on vines so kept in hot-houses, was but an accident from vegetation and the result of an irregular culture under exceptionable conditions: but it is not so; for from the hot-house it spread to the garden, and from the garden to the fields.

"This disease made its first appearance in the neighborhood of Paris in 1849. It was first remarked on the vines planted in espaliers, from which it was not long in spreading to all the surrounding country.

"In the origin the disease offered nothing alarming; but in the following year it acquired a certain gravity, acting severely upon the vines of the Luxembourg and those of Versailles. I had an opportunity to watch its progress upon a vine in espalier, planted toward the south, in one of the gardens of the Hotel of the Invalids in Paris. But this year (1851) creates more uneasiness, as the circle of action of that dreadful scourge is enlarging considerably; from which it follows that all that zone comprising the east and the west of Paris is invaded by it, and that it seems now to take its course toward the south.

"From all reports received upon the nature of that disease, and which have been read to the Society in former meetings, it results that at Alfort and at Charenton the vines have sadly suffered from the effects of it; so much so, that even the branches have been injured, and it is feared they will have to be cut near the ground. The news from Grenoble informs us that the disease made its appearance at La Tronche, and that it is not without some importance. Other information from Fontainebleau says that the *Chasselas* is invaded by the same malady, and that great fears are entertained for the crop.

"This new disease has been named *Todium Tuckari*, from Mr. TUCKER, who was the first person that discovered and described it. In the vineyards around Paris it is known under the name of *White disease*, on account of its showing itself by a light white dust covering the leaves; and which, almost imperceptible at first, increases so rapidly that it can soon be seen with the naked eye. On touching it, it resists like a moss whose roots should be implanted in the parenchyma of the leaves. On smelling it, it emits a strong smell of mushrooms. Seen with a magnifying glass, its aspect is that of a new rising moss, which seems to be incrustated in the follicles of the tissues, aspiring from it all the nourishing sugar. So deprived of its sap, the leaf curls up, dries, and drops. But that white dust, which is no other thing than a mushroom, goes from the leaf to the young sprouts, which it dries up, and then goes through the central line to the grape, filling all the interstices between the grains, shining on all sides upon the pedicles, enveloping the grain and impregnating it with its innumerable microscopic radicles.

"When this malady makes its invasion before the blooming of the grape, the grains hardly formed wither and dry up. Contrarily, when it appears after the blooming, the grains, suddenly deprived of their sap, take a tarnished color, crack, and show the seeds in the interior, dying before maturity. But when it happens (and it has been until now the greatest number of cases) that the grains reach safely one half of their growth, they generally complete their maturity; and one may then depend on gathering half a crop, but of spotted, bitter, and even unwholesome grapes.

"Many proceedings have been employed by the gardeners around Paris, to attenuate the evil. They have tried to take off the white substance—that is to say, the mushroom—from the leaves by brushing; but besides its being impracticable upon a large scale, it could not remove from the leaves the parasite which had invaded them. They have also tried to wash it off with pure water; then with an addition of lime or alum; but it proved ineffectual.

"At the Agronomique Institute of Versailles, powdered sulphur was added to water and thrown on the vines with the gardener's pump; the grapes have been washed with pure water, and then sulphur in powder blown upon them with a bellows: but all without success.

"New experiments are now tried in all parts of France where the vine is cultivated; and it is to be hoped that a successful remedy will be found to put a stop to this dreadful disease."

Ladies' Department.

PHLOX DRUMMONDI.

THE *Phlox Drummondi* is one of the most beautiful annual flowers; and, indeed, we are not certain but we should be justified in calling it the *finest* of all. It is remarkable for the splendor and variety of its colors. Flowers from the same seed will be found of almost every shade of color, from the deepest and most brilliant rose color, to the palest and most delicate pink. Every flower, though of the deepest carmine, has the under side of its petals of a pale blush color; and every petal, though of the palest pink, has a dark carmine spot at its base. Thus the variety of colors displayed in a bed of these flowers, almost exceeds description; and when they are seen under a bright sun, and agitated by a gentle breeze, the effect is exceedingly brilliant—we know of nothing more beautiful.

So well are we pleased with this flower, that we have sent a paper of this seed with every package; and if our lady readers should only succeed in raising a bed of this beautiful flower, we know they will feel well repaid for all their labor.

This Phlox was discovered in Texas, in 1835, by DRUMMOND, a botanical collector sent out by the Glasgow Botanical Society, who soon after died in Cuba, in the midst of his researches. This being one of the last plants discovered by Mr. DRUMMOND, it was named *Phlox Drummondi*, in honor of its lamented discoverer.

The seed should be sown in a nicely prepared bed about the first of May, lightly covered; and in July they will be in full blossom. They are very easily cultivated, requiring no other care than keeping them clear of weeds, and the ground mellow.

PHLOX DRUMMONDI.

Our orders for flower seeds are now all supplied, amounting to over 5000 packages, each package containing 14 varieties. If from any cause applicants have not received seeds, we shall be pleased to be informed of the fact.

Editor's Table.

WE are indebted to Lieut. TERRET, of the U. S. Navy, for several varieties of flower seeds from Palestine, which we shall endeavor to propagate. Mr. T. will accept our thanks.

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MEXICAN POTATOES.—Messrs. RAPALJE & Co. presented us with a peck of *Mexican Potatoes*, which we have no hesitation in saying is the dryest and best flavored potato we have eaten for many a day.

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ADVERTISEMENTS, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance*.

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Inquiries and Answers.

(W. D. O., Port Byron.) We would recommend Johnston's Catechism of Agricultural Chemistry and Geology, Norton's Elements of Scientific Agriculture, Johnston's Agricultural Chemistry, Boussingault's Rural Economy, and Liebig's Agricultural Chemistry. If these works are carefully studied in the order named, an amount of chemical knowledge will be obtained that cannot fail to be of great benefit to you, and every tiller of the soil.

(N. D. OVIATT, Copley, Ohio.) We think lime would not so increase the growth of the clover as to produce a full crop from half the proper number of plants. We have never seen much good result from a top-dressing of lime on clover, but a bushel of plaster to the acre has a decidedly beneficial effect. Clover rarely takes well when sown with oats.

Indian corn sown thick for fodder, cut early, and well cured, *may be cheaper*, as food for stock, than to "be at the expense and trouble of raising roots;" but it is much more exhausting to the soil, though probably not so much so as if allowed to mature its seed; and as the whole of it is consumed on the farm, and may be returned to the field in the form of manure, there is necessarily but little loss of the mineral constituents of the soil. *But there is probably a loss of nitrogen;* while in growing roots, clover, peas, &c., there is an *increase of nitrogen*, which is the most valuable element in all manuring substances.

From the heating nature of oilcake, it is not advisable to feed it constantly to horses, though a feed once or twice a week is good. For sheep and cattle, it is the most valuable and nutritious food of all vegetable substances.

We shall be glad to have the results of your experiments.

The address of the owners of the Long Wooled Sheep, given in the February number, is J. McDONALD, Warren, Herkimer Co., N. Y.; and WM. RATHBONE, Springfield, Otsego Co., N. Y.

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PLASTER ON CORN.—I wish some information on the subject of using plaster for corn—when and how it should be applied, &c. P. M.—*Hartsville, Ind.*

Sow a small handful on the hill just as the corn is through the soil. Its effect is very beneficial here.

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CORN FOR FODDER.—Will you inform me the best method of preparing sod ground for corn for fodder, the amount of seed per acre, and what is a good crop. A SUBSCRIBER.—*Barnesville, Ohio.*

Prepare the soil as you would for planting corn in the ordinary way. The richer and mellower it is, the better. Three and a half to four bushels of seed are usually sown *broadcast* per acre; but if sown in drills, and hoed, it does best, and the land is much cleaner for the following wheat crop. About the middle of May is the usual time of sowing. If sown broadcast, the seed should be soaked for a few hours; it is then soon up, and gets the start of the weeds. It is an admirable green food for working oxen or milch cows in summer, and is very profitably grown for this purpose. If intended for fodder, it should be cut and cured before frost touches it. Six tons of dry fodder per acre is a good crop, though much larger have been obtained.

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WOOLEN RAGS AS A MANURE.—After a careful perusal of your paper for two years past, I do not remember seeing any reference made to woolen rags as a manure. I am near a paper mill, and have about half an acre of land that I intend planting wholly with potatoes and carrots. I am desirous of knowing the best mode of employing woolen rags, intending to use about a ton of them on the half acre. Please give your ideas on the subject, and I will give you the result of my operations, when ascertained. J. C.—*Toronto, C. W.*

Woolen rags contain 17 per cent. of nitrogen, and are consequently a highly valuable manure for corn, wheat, and potatoes. They are extensively used in England as a manure for wheat, especially on heavy lands, and sell for $25 per ton. They are usually plowed under, at the rate of 500 pounds per acre. The more finely they are reduced, the better; and if they were soaked in water or barn-yard wash for some time previous to their application, they would decompose more speedily, and consequently be more efficacious for the first crop. If they are pure woolen rags, "one ton to half an acre" would be much too high a manuring; and if the rags all decompose the first year, would be very injurious. It is a first rate guano that contains 15 per cent. of nitrogen, whereas woolen rags contain 17 per cent.; and 400 lbs. of guano per acre is a good dressing for wheat or potatoes. 700 lbs. per acre often proves very injurious to the crop.

Ordinary barn-yard manure contains about half a per cent. of nitrogen; so that one ton of woolen rags would, in this respect, be equal to 34 tons of manure. Horn shavings, leather, hair, and dried blood, have the same composition as woolen rags, and are equally valuable. Blood, however, is considered the best by farmers, because it acts quicker; but the ultimate result must be the same.

Woolen rags are found very valuable for *hops.* Plowed in near their roots, their effect is very lasting and beneficial. Previous to the potato disease, we have seen 600 bushels of potatoes obtained from an acre on which a compost of horse manure and pieces of leather that had been decomposing for six or eight months was used at the rate of 15 tons per acre.

Were we going to use woolen rags for potatoes, we should soak them, and apply in the hill at the rate of 700 or 800 lbs. per acre.

Please let us know the result of the application.

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HORTICULTURAL.

(Ancaster, C. W.) **Hedge Plants.**—The White Thorn is affected with mildew, leaf-blight, wooly aphis, &c., whilst the Buckthorn is exempt from all. On this account it is preferable for this country. The Honey Locust is a rapid growing plant, with powerful, sharp spines, and with proper attention to shearing, to make it dense at the bottom, makes a good hedge.

(A. G. H., Byron, Mich.) **Apple Seeds.**—They cannot be procured here, now. The other articles sent alone, would not be worth cost of carriage.

(A. W. P., Columbus, Iowa.) **Planting Apple Grafts on Sod Land.**—It should be submitted to a summer fallow the season before planting. Set in rows three and a half feet apart, if you intend to cultivate with a horse, and the plants a foot or fifteen inches apart in the rows.

Girdled Trees.—Mr. Jas. Harris, of Schodack, N. Y., in reply to inquiries in our last number, says that he has saved girdled trees in the following manner:—

"Take scions of last years' growth, cut the right length, flatten both ends, then with a narrow knife run under the bark above and below the girdled part, and insert the scions. Three or four may be inserted, or two inches apart, and if near the ground, bank up with earth; if too high for this, put on some mud and tie straw over it."

Mr. H. Stanford, of Sugar Grove, Pa., writes us of the same remedy; but he fits his scions to the tree on the under side the whole length, fastens them in with small tacks, and fills the cavities with wax.

Mr. Orrin Wicks, of South Waterloo, N. Y., and Mr. Geo. W. Sheppard, of Geneva, Ashtabula Co., Ohio, write us of the same remedy.

Osage Orange Hedges.—Mr. George W. Sheppard, Geneva, Ashtabula Co., Ohio, writes us:—

"I have 150 rods now two years old; the first I set nine inches apart in the single row, the remainder one foot apart. I think a foot near enough, for if cut off, as they should be, three or four years, within six, eight, ten, or twelve inches of the ground, they will be thick enough to keep out hens or pigs; and in six or eight years, high and strong enough to keep out men or oxen. I mix the seed with an equal quantity of sand moistened, keep it moist all winter, and let it freeze and thaw, and plant it when I plant corn. It is the best plant for hedge in this country, perfectly hardy here, on the south shore of Lake Erie."

Culture and Manuring of Trees.—"If farmers would hoe their trees as often as their corn, and apply ashes, leached or unleached, around them, they would not be troubled with mice; and ashes and chip manure will make them grow enough faster to pay for the trouble twice over. G. W. Sheppard.

Be careful not to let the *un*-leached ashes touch the bark of the tree.—Ed.

(B. S. B., Greenwood, Steuben Co.) **Dwarf Fruit Trees.**—We must refer you to the nurserymen's advertisements.

Dwarf Apples are budded or grafted on the Paradise stock, (a dwarf species of the apple). Set them five or six feet apart.

Dwarf Pears should be budded or grafted on the Angers or French Quince stock, and they may be set eight to twelve feet apart, according to circumstances.

Plant either in the spring or fall. We hold that, if the soil be dry and the planting properly done, both seasons are equally good for hardy trees. The "Fruit Garden" will furnish you information on these points more in detail than we possibly can now. You can buy stock at the nurseries this spring, and either root-graft them before setting out, or plant them and they will be fit for budding in August next. We advise the latter.

(W. H. R., Pultneyville, N. Y.) The Angers, or French Quince, are more vigorous than our common variety, and make a better stock for the pear, as they keep pace better with its growth. The common quince almost ceases to grow after two years' growth of the pear on them, and then the trees die immediately. On the French stock we have trees ten years old, in which there is very little difference between the size of the pear and quince. Stocks should be, when budded, half to three-quarters of an inch in diameter.

(J. K., Cavan, C. W.) FOREIGN GRAPES IN A COLD VINERY.—You can ripen grapes perfectly in a cold vinery in your latitude—44¼ deg. north. You will have short rafters in a house only fourteen feet wide, and, of course, shorter canes, but that is the only or principal difference. The *length* will determine the number of vines—one to each rafter at about three to three and a half feet apart.

Five varieties, including one native.—Native—*Catawba.* Foreign—*Black Hamburg, White Frontignan, Royal Muscadine, Black St. Peters.*

Instead of any two of the above, you might take the *Chasselas of Fontainbleau,* and *Muscat of Alexandria.*

GROWTH OF A PLUM GRAFT.—Mr. AMOS FREEMAN, Wheatfield. N. Y., says—

"Last spring I set a graft of the *Duquesne* plum in a *Yellow Egg* stock, and in the fall the longest shoot measured 6 feet 1¼ inches in length; the next, 5 feet 6¾ inches; whole growth, 83 feet 1 inch, besides one limb taken off for buds."

◆

INSECTS.—"My fruit trees are infested with insects that prevent their bearing. How shall I destroy them? H.—*East Hampton.*"

What insects? You will find in back numbers of this journal, methods described of destroying caterpillars, slugs, aphis, &c., the common enemies of fruit trees.

◆

OSAGE ORANGE.—Please inform me whether the Osage Orange has been cultivated long, for hedging purposes, in your section of country; and if so, whether the growth still continues as luxuriant as during the first two or three years. I should also be pleased to know whether it is subject to sprout from the root, and spread, to the annoyance of the farmer. It has but lately been introduced into this section of country; and from its unusual growth, I have been disposed to question the propriety of cultivating it, lest it can not be kept within bounds.

Necessity will soon compel many of us to resort to *hedging,* in consequence of the scarcity of rail timber in this section of country; and we feel desirous of gaining some information in another way from that of sad experience. JOHN P. BRADY.—*Cedar Grove, Ind.*

The vigor remarkable in young plants, subsides in two or three years, when it has been shorn a few times. We have never seen it throw up suckers. It is just beginning to be cultivated here. There are some good specimens of hedge of three years' growth, and it may be some older. If it comes well through the present severe winter, its hardiness will be less a matter of doubt than at present.

Bone Dust.

BONE DUST, Coarse Turnings and Sawings, when taken in equal parts, price $2,25 per bbl., including package.—This article is fresh, and warranted pure, from the Empire Mills.
LONGETT & GRIFFING,
[4-2t] 25 Cliff Street, New York.

Manures.

PERUVIAN GUANO, Bone Dust, Pulverized Charcoal, Poudrette, Plaster, Wood's Renovating Salts, Potash, Sulphuric Acid, Sugar-house Scum, for sale in lots to suit purchasers.
LONGETT & GRIFFING,
[4-2t] 25 Cliff Street. New York.

THE subscriber deals in, and sells on commission, all kinds of good patents. Worthless ones need not be offered.

A good Grass Mower wanted.

The best of reference given. ALLEN VANE,
No. 157 South Water Street, Chicago, Ill.
April 10, 1852.—5-3t.

Osage Orange for Hedges.

WE can furnish any number of fine yearling plants at $1.50 per 100, or $10 per 1000, or at $8 where 3000 or more are taken. Orders should be sent early. It takes about 32 plants to the rod, planted either in single rows at six inches apart, or in double rows a foot apart—either of which makes a good hedge.
ELLWANGER & BARRY.
Rochester, N. Y., Jan., 1852.

Just Published.

THORBURN'S Annual Decriptive Catalogue of Flower Seeds, for 1852, with Practical Directions for their Culture and Treatment, will be forwarded free of charge to post-paid applicants enclosing a Postoffice stamp.
J. M. THORBURN & CO.,
Seedsmen, Florists, &c.,
[5-1t] No. 15 John Street, New York.

Osage Orange Seed.

THE subscribers have just received from careful collectors in Texas, a lot of fresh Osage Orange Seed of very superior quality. Price, 75 cts. per quart, or $20 per bushel.

Also, clean Buckthorn Seed at $2 per lb.; and small quantities of Norway Spruce, Weymouth Pine, Scotch Fir, European Silver Fir, Chinese Arbor Vitæ, &c., &c.
J. M. THORBURN & CO.,
Seedsmen, Florists, &c.,
[5-1t] No. 15 John Street, New York.

Potatoes for Seed.

1000 bushels *White Mercer Potatoes,* an excellent potato, yielding first rate and never rotting. It is the favorite here. Price, $4 per barrel.

Also, 100 bushels of the *Mexican Potato*—the very best potato in existence for the table, so pronounced by all who have tested them.

Those who wish either of these kinds must apply soon, as they are going off with a rush.

Rochester, N. Y., May, 1852. J. RAPALJE & CO.

Spring Wheat.

WE have just received by the first Boat from Canada—
100 bu. of the celebrated Fife Wheat, which does not rust.
100 bu. Club Wheat.
100 " Black Sea do. grown in this State.
100 " Italian Wheat.
25 " Spring Rye.

Farmers who are in want of a good article, will please give us a call, and get some of the right kind of seed, at the Genesee Seed Store, 63 and 65 Buffalo st., Rochester, N. Y.
April, 1852. J. RAPALJE & CO.

Rochester Commercial Nurseries.

BISSELL & HOOKER offer for sale, in large or small quantities, a large stock of Fruit Trees, which they believe are inferior to none in health, beauty, or accuracy—among which are Apple, Pear, Peach, and Cherry Standards; Dwarf Pears on imported Quince stocks; Grape Vines, native and foreign; Raspberries, Strawberries, Currants, Gooseberries—strong, imported plants, at low rates. Osage Orange hedge plants. Ornamental Trees, Evergreens, Roses, &c. Green-house and Bedding-out Plants, of superior quality. Double Dahlias, Calceolarias, &c.—all of which we are confident will give satisfaction.

A general Catalogue will be sent gratis to all post-paid applicants. [3-3t]

Fruit Trees.

I AGAIN offer a large stock of Trees—about 100,000—of fine thrifty growth, composed in part of Apple, Pear, Peach, Cherry, &c.; together with an assortment of Green-House Plants suitable for bedding out—all of which are offered at extremely low prices.

Wholesale prices of Apple Trees will be from $9 to $10 per 100.

I would recommend to buyers, after examining other nurseries, to inspect mine before purchasing.

CHARLES POWIS.

Greece, Ridge Plank Road, N. Y., March 1, 1852.—3-3t.

Fruit and Ornamental Trees.

ELLWANGER & BARRY beg to remind those who intend to plant next spring, that their stock of Standard Fruit Trees for orchards, Dwarf Fruit Trees for gardens, Ornamental Trees for streets, parks, gardens, and pleasure grounds, Shrubs, Roses, &c., is very large, and offers great inducements to those who desire first rate articles.

A complete Descriptive Catalogue is sent gratis to all who apply post-paid and send stamps for postage, which must now be pre-paid—5 cts. for 500 miles or under: 10 cts. over 500 miles and below 1000 A Wholesale Catalogue also furnished.

☞ See advertisement of Shrubs, &c., &c.

Mount Hope Nurseries, Rochester, N. Y., March 1, 1852.

Morgan Stock for Sale.

THE subscriber having inducements offered him to change his residence, offers for sale, at auction, on the 18th day of August next, at 10 o'clock, at Scottsville, his entire *Morgan Stock*, consisting of a very fast traveling mare, valuable for breeding, in foal by the celebrated Vermont Morgan horse *General Gifford*, imported from Vermont in 1846, pronounced by competent judges to be the best specimen of his race, and awarded the first premium on Morgan horses at the State Fair in 1851. Also, *Zachary Taylor*, two years old in June; and *Gifford Morgan*, four years old in August; both bay studs by above horse and mare, suitable for matching or stock. Gifford Morgan has a surprisingly beautiful coat, unvaryingly dappled. Credit one year on interest. Until the 1st of July next, Gifford Morgan will be kept by some suitable person at or near Scottsville, for improvement of stock, at $10 to insure.

J. DORR.

Scottsville, N. Y., May, 1852.—5-4t.

Rochester Seed Store and Ag. Warehouse,

No. 29 Buffalo Street, Rochester, N. Y.

Sign of "The Plow," opposite the Arcade.

THE subscriber offers to farmers the largest and most complete assortment of *Implements and seeds* in Western New York, consisting of Improved Eagle, Peekskill, and Iron beam Plows; Cultivators, Straw Cutters, Corn Shellers, Ox Yokes and Bows, Road Scrapers, Shovels, Spades, Hoes, Rakes, &c., &c. Also, Railroad Horse Powers & Threshers.

His stock of *Field Seeds* is large, and warranted to be of the purest description. Carrot, Sugar Beet, Mangel Wurzel, Ruta Baga, Flat Turnip, and other seeds, by the pound, were either grown by him or imported from London, and can be relied upon as *good seeds*, and true to their kinds. Farmers and others are invited to call and examine the above stock. Discriptive Catalogues of Seeds, &c., may be had on application, or sent by mail.

May, 1852. J. P. FOGG.

The Celebrated Horse "Morgan Eagle."

THIS truly celebrated horse will stand for Mares this season, commencing April 19th, at the Franklin House in Geneseo, on Monday, Tuesday, Wednesday, and Thursday, and at Scoville's Eagle Hotel in Mt. Morris, on Friday and Saturday of each week during the season.

"Morgan Eagle" was purchased in the fall of 1847, in Tunbridge, Vt., by J. Henderson, at a high price, for the express purpose of improving the stock of horses in this county. He is about 16 hands high, and well proportioned, is a bright bay, and for symmetry and action, cannot be surpassed. Morgan Eagle, and the celebrated trotting mare, Lady Sutton, of New York, were sired by Old Morgan Eagle, of Vermont.

Breeders of horses are particularly requested to call and examine him.

Pasture will be furnished for mares sent from a distance and good attention paid to them. Escapes at the risk of the owners. Those who part with mares before foaling, will be held responsible for the insurance. Mares must be returned every two weeks or they will be held for the insurance.

J. HENDERSON & Z. H. AUSTIN,

Geneseo, April 16, 1852.

NEW AND FINE SHRUBS AND PLANTS.

ELLWANGER & BARRY, Proprietors of the Mount Hope Nurseries, Rochester, N. Y., solicit the attention of those interested in Ornamental Plants to their large stock of rare and beautiful Shrubs and Plants, among which are the following:

HARDY SHRUBS.

Deutzia Scabra, or Garland Deutzia, a fine white flowering shrub.

Forsythia Viridissima.

Ribes Gordoni—Gordon's Currant—yellow and crimson, very fine.

Spiraea Prunifolia flore pleno—small, double, white flowers in great profusion; fine dense habit.

Spiraea Lanceolata, or Reevesi, one of the finest of the genus.

Spiraea Chamaedrifolia, Niconderti, Lindleyana, Japonica, and twenty others.

Syringa (Philadelphus) *Pubescens, Zepherii, Cordata, Double, Columbiana*, and others, all fine.

Lonicera Ledibouri—a fine Californian shrub.

Tamarix, Africana, Germanica, Gallica, and *Lebanotica.*

Viburnum Lantanoides, a beautiful shrub.

Wiegela Rosea—the finest hardy shrub, lately introduced from China.

The above excellent things can be furnished in quantities, at low prices.

SELECT GREEN-HOUSE AND BEDDING PLANTS.

Fuchsias.—Our collection is one of the best in America. The most distinct and best varieties yet introduced and quite rare, such as *Pearl of England, Fair Rosamond, Serratifolia, Serratifolia multiflora, Fulgens Corymbiflora, Corymbiflora Alba, Magnificent, President, President Porcher, Spectabilis*, &c., are propagated largely.

Verbenas.—A collection of fifty varieties, comprising everything fine introduced to this time.

Heliotropes.—*Souvenir de Liege, Corymbosum*, and some new varieties just received and to be announced hereafter.

Plumbago Larpentæ.

Cupheas.—*Platycentra, Stringulosa*, and others. The first is one of the finest bedding plants.

Lantanas.—*Ewingi*, the fine new Cincinnati variety, rose and straw color; *Mutabilis Major*, and several others.

Bouvardias.—*Triphylla*, and others.

Abutilons.

Salvias.—*Splendens Major, Oppositifolia, Azurea*, and others—superb plants for masses.

Fabiana Imbricata.

Hydrangeas.—*Hortensis, Japonica, Cordata, &c.*

Buddlea Lindleyana—a fine shrubby plant with large clusters of purplish lilac flowers; blooms in the autumn.

Habrothamnus Elegans—a superb plant, half shrubby, with large clusters of showy crimson flowers; blooms equally well in the open ground in autumn, and in the house in winter.

Petunias.—A large collection, embracing all distinct and good sorts.

Lobelia fulgens insignis, Lobelia fulgens alba—flowers of dazzling beauty—both new.

Veronica Lindleyana—a charming autumn flowering plant; long elegant spikes of pale (nearly white) blossoms. *Veronica Andersoni*—finest of all—*new.*

Tree Violets—white and purple.

Chrysanthemums.—A fine collection of the novel and beautiful pompone or dwarf varieties.

Dahlias.—A superb collection, including the English and French prize sorts of 1851—all at very low rates.

Cinerarias.—A fine collection of new and beautiful sorts, including *Magnificent, Attilla, David Copperfield, Wellington, Beauty of Newington, &c. &c.*

All the above articles furnished in large or small quantities, at low rates, and packed so as to go any distance with safety.

Priced Catalogues of Dahlias, &c. &c., ready 1st of March.

March 1, 1852.

Albany Tile Works,

No. 60 Lancaster St., West of Medical College.

THE subscriber has now on hand, and is prepared to furnish to Agriculturists, Horse-Shoe and Sole Tile, for land drainage, of the most approved patterns. They are over 1 foot in length, 2¼ to 4½ inches calibre, from $12 to $18 per 1000 pieces—being the cheapest and most durable article used. Orders from a distance will receive prompt attention.

[4-6t] JOHN GOTT, Jr.

EMERY & CO.'S

Overshot Threshing Machine, with Vibrating and revolving Separators.

THE above Threshers have been extensively manufactured and sold by us for the past six years, and with a steadily increasing demand. During the two years last past, and with our latest Improved Railroad Powers, their sale has more than doubled over the same length of time before.

Although over two thousand of these Threshers have been sold by us up to this time, and without exception have given the fullest satisfaction as heretofore made, we can safely say they are, as now made, worth at least 50 per cent. more than heretofore, and without any increase in prices being charged for them.

Their construction is such that the grain and straw are carried by the cylinder from a level feeding-table, over and between it and the concave, which is placed above instead of below as is generally done in others. The cylinders being 26 to 30 inches long, and 14 inches diameter, are much longer but smaller than those generally in use—giving more room for feeding, in proportion to work done, and doing it nearer the center of motion, and working easier, as the smaller the diameter the greater the power. Again, we require but about half the number of spikes in the cylinder, and an increased motion, so that the spikes may pass through with a velocity sufficient to take off all the grain.

The concaves have an increased number of spikes, which for both cylinder and concave are swedged into uniform shape and size, from the best Swedes Iron. They are set with an inclination which admits the straw and grain to pass freely, and with as little breaking of the straw as is consistent with a perfect separation of the grain—thus producing a sort of stripping or carding process. The concave is so confined as to be readily adjusted and present any desired angle of the spikes to the grain, and also increase or decrease the capacity of the throat, thereby retaining the straw a longer or shorter space of time in passing, as the condition and kinds of grain may require. By this arrangement, there is a saving of power of from 30 to 50 per cent. over the ordinary Threshers, whose spikes pass each other at right angles, which operation necessarily breaks the straw into many pieces at the expense of much power—a process much more easily done with a good hay cutter with sharp knives, than with the rounded edges which well formed spikes present to the straw. The feeding-table is level, allowing the feeder to stand upright and be little annoyed by dust, dirt, &c. The overshot motion avoids accidents to men or machine, (by preventing any stones, sticks, &c., getting into it in feeding,) which frequently occur with the inclined feeding-board. The grain by this motion is elevated sufficiently to be thrown upon a large seive or separator, where it is separated from the straw and falls through upon the ground or floor, together with the fine chaff, dust, &c., while the straw is discharged at the end of the separator, ready for stacking or binding.

The shafts of our cylinders are made of solid cast steel, manufactured and imported for us expressly for the purpose; and all the boxes or bearings are made of or lined with Babbet metal. The boxes used by us are always of two parts, in order to be adjusted as they may wear, or to vary the position of the cylinder, as well as to allow them to be removed, if necessary for cleaning or repair, without removing the pulleys or other parts of the machine. This is an important advantage over those boxes which are made of a sort of tube, and only removed by first removing the pulleys, &c., &c., and are never adjustable to accommodate themselves to any wearing.

The pulleys are polished and fitted to both ends of the shaft and confined by nuts and screws, and with our India rubber band, which we invariably use, form a perfectly air-tight connection; thereby bringing the atmospheric pressure to our aid, and preventing any slipping of the band. A band of this kind, say 80 feet long 8½ inches wide, will drive equally strong when four inches looser than if made of leather. This kind of band requires little care, compared with leather, is equally pliable in all temperatures, and is not affected by dryness or wet, grease, acid, or dust. It is made with but one joint, and that smoothly cemented and copper riveted, and is equally durable for straight bands as leather, the difference in cost being a little in favor of India rubber. The chief advantage of using these bands, is causing less stress upon the shafts, allowing them to run with less friction and wear on both shafts and boxes.

Cleaner and Thresher, Combined.

During the past three years we have spared neither time nor money in endeavoring to produce, at one and the same time, a CLEANING THRESHER, which will perform as well and rapidly as our Thresher and Separator, with the same force of men and team to operate it, while the increased cost of such combination should not exceed the value of a good fanning mill, say $25 to $30. During the past two seasons we have succeeded to our entire satisfaction in all respects excepting cost of construction, the increased expense of manufacturing being some fifty to seventy-five dollars, and bringing the price fully up to that of Pitts' celebrated Patent Thresher and Cleaner, which has been extensively and favorably known throughout the whole country for the past fifteen years; and when adapted for two horses, well made, and driven by our two-horse power, will do as well as any now in use, our own not excepted, setting aside perhaps something in quantity of work done.

The great excess of the demand being for our Threshers and Separators instead of Cleaners, we are compelled to confine ourselves and facilities chiefly to the former, making Cleaners only to order, and at the price of one hundred dollars each, instead of seventy-five, as heretofore advertised by us.

From our own observations, and the slow adoption of the Cleaner combined, when used by farmers with barns, and for their own purposes, we would not recommend them on the ground of economy, as the grain can generally be threshed better and faster with the Separator; and the simplicity of the one as compared with the other, together with the difference of skill required in those attending both kinds, is vastly in favor of the Thresher and Separator. Those farmers using their straw for feeding, or selling in market, find it much more valuable when threshed with a Separator. It is entirely free from the dust, dirt, and fine chaff which is mixed thoroughly through the whole mass by the current of air thrown from a Cleaner.

In field threshing, and where time is of the greatest consideration, and there is risk from exposure to weather, the straw of little value, large Cleaners, with more men and horses, are often preferable.

We have received many complimentary letters concerning our Thresher and Separator, and in every instance where both have been used, the preference for economy has been given the Thresher and Separator for farmers own use.

We can not better express the general feeling among the farmers concerning the relative advantages of Threshers and Separators, and Threshers and Cleaners, than by giving extracts from several correspondents who have seen and used both.

Extract from letter of Russel Kilbourne, of Paris Hill, Oneida Co., N. Y.

"Sirs—Since the first two hundred bushels of wheat threshed with your latest improved Railroad Horse Power and Threshing Machine and Separator, they have performed well. Two or three farmers, neighbors near me, desire machines for their own use. How soon can you ship them after they are ordered, and can you sell them any less on account of the lateness of the season? I wish very much to sell two or three of them here, if possible; not only because I think the purchasers would be better pleased with them, but because Mr. Osborn, Wheeler's agent, and who has one of Wheeler's Two-Horse Power Threshers and Winnower's here, is determined that none of yours shall be sold if he can prevent it."

In a subsequent letter, he again writes us: "The more I see of Wheeler's Power and Winnower, the more I don't like it. They can thresh just about seventy-five bushels of first rate wheat per day."

Extract of letter from Wm. H. Chalmers, of West Galway, Saratoga Co., N. Y.

"Gentlemen—I have a small team, and with moderate elevation, and without their drawing in harness, I put through large sheaves of wheat at the rate of one hundred every ten minutes, threshing it thoroughlv. Much more could be done for a short time; but I mean with the elevation and labor of team as I use in following threshing. I firmly believe your improved Power Thresher and Separator will supersede anything I have seen. Many farmers prefer the Thresher and Separator to the Winnowers, as grain can be threshed faster and better without them—requiring less men, thereby saving sufficient time for cleaning with a good Fanning Mill. I have seen one of Wheeler's Horse Powers, with Thresher and Winnower, at work here, threshing but one quarter as fast as I do with your machines. An Eight-Horse Power, with Thresher and Cleaner, working in this vicinity, requiring twice as many men, is pronounced, by those taking away the straw from both, to thresh less per day than mine. I wish you to write me if you have made any improvements since mine, and have you Powers, &c., on hand, as I expect to sell some."

Extract from letter of Peter Webber, Herkimer, Feb. 3, '52.

"Gentlemen—After giving your improved Horse Power

Thresher and Separator a thorough trial, I consider it superior to any I have seen or tried; it works to my perfect satisfaction. I had given the others a trial before ordering yours, but was dissatisfied until I saw yours operate. I feel a pleasure in recommending it to farmers in general as being well made, and as having no equal in arrangement, power, or workmanship."

Extract of letter from W. D. Mason, Jefferson, Ashtabula Co., Ohio, Nov. 30, 1851.

"Gentlemen—I write to know your terms for your Improved Railroad Horse Power. I enclose a copy of Wheeler's, which I received from his agent; and if yours come near the same, you may consider this an order for one, for which I will remit as soon as I get your answer. I have tried Wheeler's Power, at the request of his agent, but find the friction so great upon the pinions that it causes me to think it cannot be a lasting power."

Extract from letter of J. N. Rottiers, of Lafargeville, Jefferson Co., N. Y.

"Dear Sirs—Your last set of Improved Horse Power Thresher and Separator has safely arrived, and in the best condition. The whole have given the best of satisfaction, and are the admiration of every one. The Saw Mill has not been tried, but presume will prove as good as the other labor-saving implements made at your establishment—Wheeler, Melick, & Co., of your city, advertise a Thresher and Cleaner, and recommend it for speed and simplicity. I should like to have your opinion of its merits, knowing as I do that you are always ready to give everything its due."

For further testimonials concerning the utility and superiority of our Threshers and Separators, and also our Improved Railroad Horse Powers, we refer the public to the following persons from among the many to whom we have recently sold them, and taken in exchange the Wheeler's Powers, Threshers, &c., at a discount in favor of our own of from five to fifty dollars each; and in nearly all cases they are being used for public threshing.

HON. J. M. SHERWOOD, Auburn, N. Y.;
JNO. McD. McINTYRE, Esq., Albany, N. Y.;
JNO. N. ROTTIERS, Esq., Lafargeville, Jeff. Co., N.Y.;
H. L. STEWARTS ROOT, Albany County;
JACOB LANSING, Greenbush, Rensselaer Co., N. Y.;
REUBEN YOUNG, Berne, Albany Co., N. Y.;
GEORGE L. HAYNES, Fultonham, Scho. Co., N. Y.;
——— SMITH, Canajoharie, Montgomery Co., N. Y.;
——— DETMER, Canajoharie, Mont. Co., N. Y.;
——— DIEVENDORF, Fort Plain, Mont. Co., N. Y.;
E. STILLWELL, Fort Plain, Mont. Co., N. Y.;
COOPER & WOODRUFF, Watertown, Jeff. Co., N. Y.;
J. A. DUNN, (Saratoga and Whitehall R. R.) Saratoga;
JOHN POST, Boonville, Oneida Co., N. Y.;
ELA MERRIAM, Leyden, Lewis Co., N. Y.;
J. C. COLLINS, Constableville, Lewis Co., N. Y.

Emery & Co.'s Railroad Horse Powers &c.

ROCHESTER AGENCY.

THE subscriber having been in the employ of Messrs. Emery & Co., of Albany, for the last six years, has been induced to open an agency for the sale of their justly celebrated Premium Horse Powers, Threshers, Separators, &c., in Rochester. Particular attention will be paid to selling and putting up the Horse Powers, and other fixtures for threshing, &c. A thorough knowledge of these machines enables him to put them up more satisfactorily than has been done heretofore. Price and terms same as at Albany, transportation added.

He will also keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, ready for use, adapted to the Power; Plows; Cultivators; Hay Cutters; and all other agricultural implements.

All interested are invited to call and examine the machines and implements at the store of Briggs & Bro., No. 68 State Street Rochester, N. Y. E. D. HALLOCK.

McCormick's Reaping and Mowing Machine.

IN offering my Reaping and Mowing Machine to the farmers of the country for the next harvest, from the many flattering notices that have been taken of it during the past year by the press generally, it is necessary to add but little in relation to its merits at this time. In addition to the "Great Medal" awarded by the "*Council of Chairmen* of the Great Exhibition of all Nations," in London—the award made after two trials with Hussey's machine, (and one made with an English machine made on the plan of Hussey's)—one made in cutting heavy green wheat, and the other in cutting ripe wheat in a fair condition for harvesting—the first premiums or medals of the State Agricultural Societies of Wisconsin, Michigan, New York, and Pennsylvania, and of the Franklin Institute of Philadelphia, have been awarded for the same, during the last fall; and also the gold medal of the "Chicago Mechanics' Institute," for the "best reaping and *mowing* machine," after a trial by its committee in cutting *prairie grass*, in competition with Ruggs & Danford's. It is only necessary to add that this machine has been considerably improved during the last summer, and is now warranted to operate as well in cutting *grass as grain*—the *additional mowing attachment*, with a separate sickle, and some other *extras*, only costing $30, or $25 if paid in cash.

As a further admonition both to *infringers* and *farmers*, I have to say that while Seymour & Morgan are going on to manufacture more reapers, they have made no provision to pay the judgment against them for $17,806; and another suit for infringement in the manufacture of five hundred reapers since the commencement of the first is about to be brought against them—and that, *if they fail to pay the damages, the purchasers* are not only *liable*, but may at any time *and will be sued for the same.*

These machines are not only improved in construction, but are being manufactured in a style commensurate with their extended reputation, and more expensively than ever before, being determined that that reputation shall be sustained. The price of the reaper alone, as heretofore, is $105, in cash; or $110, part cash and part on time, deliverable in Buffalo or Rochester. And it is warranted as usual to cut one and a half acres of grain per hour; and the mowing machine one acre per hour, and on smooth land to do the cutting as well as is done by ordinary mowing. Mowing attachments for old reapers, being more expensively constructed, will cost $55, as heretofore.

Washington, April 10, 1852. C. H. McCORMICK.

P. S. The Reapers will be forwarded to any part of the State or the Canadas, if ordered in season of THOS. J. PATTERSON, the General Agent at Rochester, Office No. 6 Burns' Building. Responsible agents wanted by him, who will undertake to sell the machines in the unoccupied districts in New York and Canada, to whom liberal commissions will be allowed.

Peas! Peas!!

WE are now receiving by the first boat from Canada—

1,000	bushels	pure White Field Peas, such as Golden Vine, Creeper, White Canada, etc.
500	bushels	White Marrowfat.
100	"	Black Eyed do.
100	"	Blue Prussian.
200	"	Early Washington.
100	"	Early Frame.
100	"	Early Warwick.

Farmers who want good Peas at low prices, will please call at the Genesee Seed Store and Agricultural Warehouse, 63 and 65 Buffalo st. J. RAPALJE & CO.

April, 1852.

Tents! Tents!!

FOR SALE, to rent, or made to order, of any required dimensions. Agricultural Societies wishing to hire Tents the coming season, will please make early application, as by knowing early how many, and at what time they will be needed, I can make arrangements to supply all.

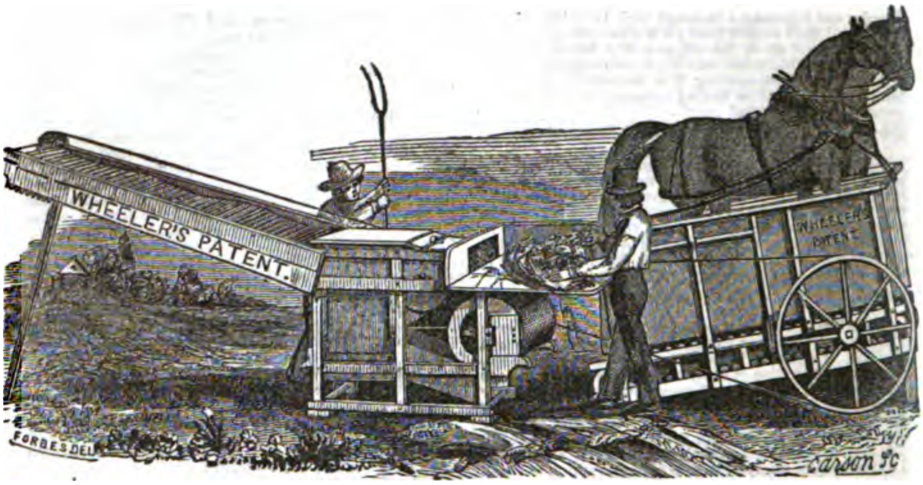
E. C. WILLIAMS, AGENT,
Sail and Tent Maker, No. 12 Buffalo St., Rochester, N. Y.

N. B.—Flags, National and Agricultural, with devices, or any other kind, made to order at short notice.

April, 1852.

Union Agricultural Warehouse and Seed Store.

RALPH & CO., No. 23 Fulton Street, New York, near Fulton Market, Dealers in all the most approved Agricultural and Horticultural Implements; Imported and American Field and Garden Seeds; Ornamental Shade and Fruit Trees; Guano; Bone Dust; Poudrette, &c. Wrought Iron Plows, Trucks, Barrows, &c., &c, always on hand. Also, the Excelsior, or California Plow. [3-3t]



New York State Agricultural Works,

ALBANY, N. Y.,

BY WHEELER, MELICK & CO.

THE subscribers offer this season a new and most valuable machine in the successful combination of a *Winnower* with their Overshot Thresher. It is easily driven by one Double Horse Power, and has now been fairly tested, a large number having been in constant use during the past threshing season.

We have numerous letters from gentlemen who have used the Winnower, and gave extracts from a few of them in our advertisements of last month, and we now insert a few more. We might add a large number, but it is deemed unnecessary.

[*From R. Olney, of Portage, N. Y.*]

Messrs. Wheeler, Melick, & Co.—I will now state some facts in regard to your Thresher and Winnower. We first used it to thresh oats, which were good and not very long straw. With five hands we threshed and cleaned fit for any market, 60 bushels per hour while running. This is not guess work, as is frequently the case, but we kept the time to the minutes, and much larger figures might have been made had we exerted ourselves. Our wheat was *heavy growth and very long straw.* We averaged 20 to 25 bushels an hour, using a pair of mules and a span of very light horses alternately; but with either team alone, and five hands, I can thresh 400 bushels good oats a day, and half that quantity of wheat, and make it no harder for team or hands than ordinary farm work. The machine is admirably adapted to the farmer's use; can be worked at so little expense and in bad weather when little else can be done. It is of the most simple and durable construction, there being nothing liable to break or soon wear out but that a common farmer can repair. It cleans the grain well and wastes less than any other I ever examined. I write thus minutely that you may understand the facts as they are; the figures I have given being taken from our ordinary threshing without any effort to hurry business.

[*From S. H. Olney, of Granger, N. Y.*]

Messrs. Wheeler, Melick, & Co.—I have used your Patent Horse Power and Winnower while it threshed about 3000 bushels of grain, and am happy to say it has given the best satisfaction. With a light pair of horses and five hands we have threshed from 50 to 60 bushels of oats per hour, and about half as much wheat. My ordinary day's work of oats is from 250 to 300 bushels and 125 to 150 of wheat. I can confidently recommend this machine to farmers as superior to any I have used, although I have used various kinds for about 15 years.

[*From Chester Olney, Dated March* 1, 1852.]

Messrs. Wheeler, Melick, & Co.—Last fall I employed Mr. Olney with one of your Powers & Winnowers to do my threshing, and I most cheerfully state that the work was done better, with a less number of hands and less waste than ever before with other machines. It threshed from 20 to 30 bushels of wheat per hour, and twice as much of oats.

[*From N. Olney, Esq., of Portage, N. Y.*]

Messrs. Wheeler, Melick, & Co.—You ask my opinion in regard to your Thresher & Winnower, but as two of my sons and one of my neighbors have given you some details, I will merely say that in my opinion your machine will do better work than any other I ever used, although I have used many different kinds for the last 20 years.

[*From a second letter of E. French, Esq., of Bridgeport, N. Y., dated March* 9, 1852.]

Messrs. Wheeler, Melick, & Co.—I am not able to do your Winnower the justice it deserves. I have used it since August, and it has earned $500 without asking for work, while other machines have been begging for it. I have had a man running it who has an eight-horse machine of his own, and good of its kind; but he could not get work with it. I have taken pains to exhibit the operation of your machine, and have seen none but pronounce it the most perfect in use. It has threshed 25 bushels per hour, and is capable of threshing 200 bushels per day, of good wheat. My wheat was of the *Soule's* variety. I sold it from the machine for seed, without other cleaning. Oats it will clean better than any Fanning Mill I ever used.

[*From E. T. Tiffany, of Dimock, Pa.*]

Messrs. Wheeler, Melick, & Co.—I consider your combined Thresher and Winnower one of the best machines ever introduced into Northern Pennsylvania. I have used one of them through December and a part of January, and did more business than any other four machines in this place. With a good team I can thresh 400 bushels of oats per day, and I think with an exchange I could thresh 500 or 600, and with less waste and expense than any other machine in existence. Could I get experienced workmen, I would order one or two more. It would be the best investment I could make. I can make better profit with one of your machines than can be obtained from any two farms in Susquehannah county. Your Thresher and Winnower receives the highest approbation of our farmers.

[*From Samuel Tucker, of North Evans, N. Y.*]

Messrs. Wheeler, Melick, & Co.—In reply to your request about the Thresher and Winnower, I am ready to answer that it works well. Indeed, its equal was never seen in Erie Co. I have threshed 18,794 bushels of wheat, oats, and barley, besides 50 bushels of grass seed. A number of my neighbors want machines like mine.

☞ **Price of Double Power Thresher & Winnower, $[illegible]**

The superiority of WHEELER'S PATENT RAILWAY CHAIN HORSE POWER, and OVERSHOT THRESHER and SEPARATOR is universally acknowledged.—Thousands of them are in use, many of which have threshed from 50,000 to 100,000 bushels of grain, and are still in good condition. Probably more than four times as many of these machines were sold during last year, as of any other kind. They are beyond doubt the most durable and economical machine in use. Their capacity has been tested by repeated trials as well at the New York and Pennsylvania Fairs, as on several private occasions, in competition with another machine made in this city which has been advertised to be far superior to ours, and in every instance the result has been about *one-third*, and in some instances more, in favor of our machines. In every case except one where we have submitted our machine to a *working* test at Fairs, it has taken the highest premiums, and in that excepted case the Committee decided that our machine performed its work in 8 minutes and its competitor in 11½ minutes, being nearly one-third in favor of ours.

We have also exhibited ours in competition with the same machine at the State Fairs in Ohio, Michigan and Pennsylvania, and also at the Provincial Fair in Upper Canada, at all of which we received the highest premiums, viz.: In Ohio, a Silver Medal and Diploma; in Michigan, $20; in Pennsylvania, $10; and in Canada, a Diploma.

We have numerous similar testimonials from County Societies, where we have always received the highest premiums awarded to Chain Powers.

Price of One Horse Power, Thresher, Separator and Belting,	$120
Two Horse Do.,	145

Besides the above, we manufacture and keep constantly on hand among other articles, Clover Hullers. Straw and Stalk Cutters, Portable Saw Mills, (adapted to Horse Powers,) and Single Powers with Churn Geer attached. These last are extensively used in large Dairies, and are so arranged that the Power is used at pleasure for either threshing, churning, wood sawing, or other purposes.

☞ All machines made and sold by us are *warranted to give satisfaction* or they may be returned, after a reasonable time for trial.

Orders are solicited and will be promptly filled.

WHEELER, MELICK & CO.
Corners of Hamilton, Liberty and Pruyn Streets,
(Near the Steamboat Landing,) Albany, N. Y.
May, 1852.

The Subscribers have obtained from Messrs. Wheeler, Melick & Co., of Albany, the exclusive sale and general agency in Rochester and Western New York, of their celebrated Agricultural Machines, which we will sell at their Albany prices, adding transportation.

J. RAPALJE & CO.

New York Agricultural Warehouse.

A. B. ALLEN & CO.,
189 & 191 *Water Street, New York.*

PLOWS of a great variety of patterns and different sizes calculated for sward and stubble land, wet meadows and recently drained swamps, where roots abound. Among these plows, also, are the deep-breaking-up, flat-furrow, lap-furrow, self-sharpening, side-hill, double mould-board, corn, cotton, cane, rice, and subsoil, with single or double wings.

HARROWS—Triangular, Square, Geddes, and Scotch.

ROLLERS with iron sections one foot long, and of different diameters. These can be arranged on an iron shaft of any width.

CULTIVATORS of upwards of twenty different kinds, steel tooth and cast iron.

SEED SOWERS of six different kinds and prices.

HORSE POWERS—Endless chain and circular, of wood or cast iron.

THRESHERS, with or without Separators.

GRAIN MILLS of cast iron, and burr stone, to work either by hand, horse, or water power.

CORN SHELLERS, single and double, large and small, cylindrical to work by hand, or otherwise.

STRAW CUTTERS with spiral, straight, or circular knives.

VEGETABLE CUTTERS, for turnips and other roots, together with a great variety of all other Agricultural and Horticultural Implements kept in the United States, such as hoes, shovels, spades, rakes, manure and hay forks, grain cradles, scythes, snaths, &c., &c.

CASTINGS of all kinds, for plows, cotton gins, and rollers.

WAGONS and CARTS, for horse, ox, or hand.

STEAM ENGINES, for farm and other purposes.

Our Implements occupy three large stores, and we believe they make up the largest and most complete assortment in America. In addition, we have a machine shop employing upwards of one hundred men, where any articles in our line can be made to order.

A. B. ALLEN & CO.,
Feb., 1851. 189 and 191 Water St., New York.

LEWIS G. MORRIS'

THIRD ANNUAL SALE, BY AUCTION, OF IMPROVED BREEDS OF DOMESTIC ANIMALS,

Will take place at Mount Fordham, Westchester Co., (11 miles from City Hall, New York,) on WEDNESDAY, JUNE 9, 1852. JAMES M. MILLER, Auctioneer.

APPLICATION need not be made at private sale, as I decline in all cases, so as to make it an object for persons at a distance to attend. Sale positive to the highest bidder, without reserve.

Numbering about fifty head of Horned Stock, including a variety of ages and sex, consisting of Pure Bred Short Horns, Devons, and Ayrshires; Southdown Buck Lambs, and a very few Ewes; Suffolk and Essex Swine. Catalogues, with full pedigrees, &c., &c., will be ready for delivery on the first of May—to be obtained from the subscriber, or at the offices of any of the principal Agricultural Journals or Stores in the Union. This sale will offer the best opportunity to obtain very fine animals I ever have given, as I shall reduce my herd lower than ever before, contemplating a trip to Europe, to be absent a year, and shall not have another sale until 1854.

It will be seen by reference to the proceedings of our State Agricultural Society, that I was the most successful exhibitor of Domestic Animals, at the late State Fair.

I will also offer a new feature to American breeders—one which works well in Europe; that is, *letting* the *services* of *male animals;* and will solicit propositions from such as see fit to try it. CONDITIONS—The animal hired, to be at the risk of the owner, unless by some positive neglect or carelessness of the hirer; the expense of transportation too and from, to be borne jointly; the term of letting, to be one year or less, as parties agree; price to be adjusted by parties—to be paid in advance when the bull is taken away; circumstances would vary the price; animal to be kept in accordance with instructions of owner before taking him away.

I offer on the foregoing conditions, three celebrated prize bulls, "Major," a Devon, nine years old; "Lamartine," a Short Horn, four years old; "Lord Eryholme," Short Horn, three years old. Pedigrees will be given in Catalogues.

At the time of my sale, (and I would not part with them before,) I shall have secured two or three yearly setts of their progeny; and as I shall send out in August next a new importation of male animals, I shall not want the services of either of these next year. I would not sell them, as I wish to keep control of their propagating qualities hereafter.

I also have one imported buck, the prize winner at Rochester last fall, imported direct from the celebrated Jonas Webb; and also five yearling bucks, winners also, bred by me, from bucks and ewes imported direct from the above celebrated breeder. They will be let on the same conditions as the bulls, excepting that I will keep them until the party hiring wishes them, and they must be returned to me on or about Christmas Day. By this plan, the party hiring gets rid of the risk and trouble of keeping a buck the year round. All communications by mail must be prepaid, and I will prepay the answers. L. G. MORRIS.

Mount Fordham, April, 1852.—5-2t.

Wood's Renovating Salts.

THE subscribers are now receiving large quantities of this valuable manure put up in barrels, which we will sell at one cent per lb.—no charge for barrels.

This article is made from the following ingredients, viz.: Potash, Bone Dust, Bone Coal, Plaster, Glauber Salts, Saltpetre, Oil of Vitriol, Salts of Ammonia, Gas, Liquor, and Bullocks' Blood. For sale at the State Agricultural Warehouse, No. 25 Cliff street, New York.

LONGETT & GRIFFING.

We hereby certify, that our Renovating Salts are composed of the ingredients represented, and pledge ourselves to refund the money in all cases, to purchasers who can produce satisfactory proof to the contrary. WOOD & Co.

New York, March, 1, 1852. [4-2t]

Field and Garden Seeds.

CLOVER, Large Clover, Timothy Seed, Blue Grass, Red Top, Ray Grass, White Clover, and Lucerne.

Garden Seeds—Ruta Baga, Turnep, Cabbage, Beet, Carrot, Parsnep, Peas and Beans of every variety.

Fruit and Ornamental Trees—Having been appointed agent for one of the best nurseries in the country, we are prepared to execute orders at short notice.

LONGETT & GRIFFING,
[4-2t] 25 Cliff Street, New York.

Prices of Agricultural Products at the Principal Markets in the United States. — Ap'l 19, 1852.

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Philadelphia.	
Beef, per 100 lbs....	$5.75	a 6.75	$6.00	a 7.50	$4.00	a 5.00	$4.00	a 4.95			$4.25	a 5.75
do mess, per bbl..	9.75	12.75	12.00	13.00	10.00	10.50					14.50	15.50
Pork, per 100 lbs....					6.00	7.00	4.00	4.12½				
do mess, per bbl.		18.00	18.00	18.50	17.00	17.50	16.00	16.50	$14.50	a 16.50	16.50	18.00
Lard, per lb.........	9	9½	10	12	10	10½	7½	8	6¼	9¼	9½	10¾
Butter, do	18	30	22	28		20	8	10	9	16	14	16
Cheese, do	6½	8	6	8		8	5	7	6½	8		
Flour, per bbl.......	4.63	5.75	4.75	5.75	4.50	5.00		3.50		3.22	4.25	3.75
Wheat, per bush....	95	1.12	1.00	1.25	94	98	60	70	61	63		96
Corn, shelled, per bu.	65	66	61	65	48	50	33	34	25	28	61	61½
Rye, do	74	76	72	74	56	60			50	54	72	73
Oats, do	38	43½	40	48	34	36	17	18		22	38	40
Barley, do	75			75	65	70			30	40		
Clover seed, do	8 pr. lb.		9 a 11 per lb.		4.50	5.50	12½ per lb.			5.00		4.25
Timothy seed, do	16.18 per tce.				2.00	3.00		2.25	1.50	2.25	2.75	3.00
Flax seed, do	1.20	1.30	1.20	1.37	1.25	1.50		1.00		1.00	1.25	1.30
Hay, per ton........	11.50	12.00	11.50	12.00	7.00	11.00			8.00	13.00		
Wool, per lb........	30	44	31	46	30	40	30	40	26	35		52½
Wood, hard, per cord					4.00	5.00	3.25	5.00				

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Improved Stock.

CATTLE of the Durham, Devon, Hereford, Alderney, and Ayrshire breeds.

SHEEP of the Native and French Merino, Saxony, South Down, and Cotswold.

PIGS of the Lincoln, Suffolk, and Berkshire breeds.

From our long experience as breeders and dealers in the above kinds of stock, and our excellent situation for purchasing and shipping, we think we can do as good justice to orders, as any other house in the United States.

A. B. ALLEN & CO.,
April 1, 1852—tf. 189 and 191 Water st., New York.

Field and Garden Seeds.

WE have recently imported from England, France and Germany, and have grown in the United States, expressly for us, a fine assortment of the best and most approved kinds of Field and Garden Seeds.

Agricultural and Horticultural Implements, a large assortment of the various kinds suitable for North and South America.

A. B. ALLEN & CO.
April, 1852—tf. 189 and 191 Water st., New York.

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A SEMI-MONTHLY Periodical of 32 pages. Edited by William S. King, Prof. J. J. Mapes, and A. W. Dodge, Corresponding Secretary of the Massachusetts Board of Agriculture. Published at Nos. 8 and 10 Gerrish Block, Blackstone Street, Boston. Terms—$2 per annum; Four copies $6; Ten copies, $14. The money must always accompany the order.

Among the principal contributors are M. P. Wilder, President Massachusetts Board of Agriculture, Dr. Charles T. Jackson, Levi Bartlett, John W. Proctor, President Essex Agricultural Society, Samuel Walker, President Massachusetts Horticultural Society, J. E. Teschemaker, S. H. Huntington, Hartford, T. B. Miner, Author of American Bee Keeper's Manual, Rev. J. L. Blake, D.D., Author of Farmer's Every-day Book, &c., Rev. W. Clift, and many other well known writers and practical men.

☞ Good Agents wanted in all parts of the country.

Address WILLIAM S. KING,
8 and 10 Gerrish Block, Blackstone st., Boston, Mass.
April, 1852—2t.

Clover and Timothy Seed.

NOW on hand and for sale at the Genesee Seed Store and Agricultural Warehouse, 63 and 65 Buffalo St.

500 bushels good Timothy Seed.
200 " prime Clover.

Rochester, April, 1852. J. RAPALJE & CO.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, Jr., Editors.
P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

Five Copies for $2—Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

Subscription money, if properly enclosed, may be sent (post-paid or free) at the risk of the Publisher. Address to

DANIEL LEE,
December, 1851. *Rochester, N. Y.*

Postage on the Genesee Farmer.—50 miles or under, five cents per year; exceeding 50 miles and not over 300, ten cents; exceeding 300 and not over 1000, fifteen cents; exceeding 1000 and not over 2000, twenty cents; exceeding 2000 and not over 4000, twenty-five cents; for any distance exceeding 4000, thirty cents.

STEREOTYPED BY. J. W. BROWN, ROCHESTER, N. Y.

VOL. XIII. ROCHESTER, N. Y., JUNE, 1852. No. VI.

OBSERVATIONS ON THE GROWTH AND NOURISHMENT OF PLANTS.

No nation has produced more scientific ideas relating to agriculture, than the United States; but owing to various causes, the chief of which is the want of popular appreciation and sympathy, these valuable ideas have been universally neglected, and nearly fruitless. The truth of this statement has been strongly impressed on our mind by reading a short paper "On the Growth and Nourishment of Plants," by Mr. EZRA L'HOMMEDIEU, Vice President of the Society for the Promotion of Agriculture, Arts, and Manufactures; organized in 1791, and chartered by the Legislature of New York in 1793; which was written near the close of the last century. But few copies of the Transactions of this Society were printed, and it is due to the agricultural literature of the country that some of its most useful articles be reproduced for the instruction of the present generation. Chancellor LIVINGSTON was President of the Society from its beginning till his lamented death, in 1813; and nearly all its essays were from the pens of the ablest men this State or nation can boast. So high is our estimation of the science of Mr. L'HOMMEDIEU at that early day, and before LIEBIG was born, that we copy with the pen, and publish the whole of his "Observations" above referred to, for future use.

"In considering the growth of plants and vegetables, we shall inquire, so far as we are able, into their food or nourishment; and in doing this, shall endeavor to go no further than we can be justified by facts and appearances. I believe we are on safe ground when we say that the plant receives no nourishment from the earth. Many have been the experiments of raising plants, shrubs, and trees, in boxes filled with earth; and this earth being weighed after the shrub or tree had grown to maturity, (as the orange and lemon tree,) and after taking out the tree, the dirt is not found to have lost any of its weight. It thence follows that the earth is only a bed to hold up the plant or tree, that it may receive its nourishment from some other source; and the difference between good land and poor land consists only in the position of its parts, so as to enable the plant or tree to receive nourishment from different resources better in the one than in the other, although neither afford any in themselves.

"The next inquiry will then be, What is the food of Plants? and the last, By what means is this nourishment received?

"If we leave out earth, there will remain only the two elements water * and air that can afford nourishment necessary for the food and growth of the vegetable creation: for it is supposed in this theory, that manures of any kind afford no nourishment to the plant, but only answer for the purpose of altering those parts of the earth in such a manner as is best calculated for the extension of roots, and reception of the water and air; or by attractions of such parts of the atmosphere as are food for plants, or, by the emission of fixed and other air, of which they are peculiarly possessed, add to vegetation. If we suppose, as some philosophers have lately endeavored to prove, that water is formed from air, and of which there appears to be great probability, there will then be in fact nothing but air in some shape or other, from which vegetables can derive subsistence. But at this we shall not be surprised when we consider the atmosphere as a vast laboratory, in which nature as the operator performs immense productions of various kinds, suitable for the nourishment of every species of the vegetable creation, and is the grand receiver in which the decomposition of all bodies, and the various kinds of air arising from them, are received, mingled, combined, and separated, *not by chance*, but by infinite Power and Wisdom. Chemists are agreed in one general opinion, which has been satisfactorily proved, that, supposing the air in general, or atmospheric air, to consist of 100 parts, only about 28 of those parts are adapted to the support of animal life; the other parts are for the nourishment of vegetables. We see vegetables grow more rapidly in cities than in the country, which confirms the theory; as in cities the air has a greater proportion of putrefaction, consequently more of that kind of air suitable for the growth of plants than in the country. We further observe, where a compost is made of putrefying substances, as fish for instance, *vegetables at a distance from the heap of compost grow luxuriently*, which must be from the putrified air proceeding from the compost, and absorbed by the leaves or blades of the vegetables. We frequently see in flower pots hyacinths and other vegetables growing rapidly and coming to perfection, supported by the mouth of the flower pot, the pots being filled with water only, in which we see the roots growing and extending in proportion to the stalks, leaves, and flowers. Here the plant receives all its nourishment from the air and water imbibed by its roots and branches. The *sedum anacampseros*, or evergreen, too, we frequently see hung up by a thread, growing very well without any water, and nourished only by the air. It can not be thought more strange that the air should change into a plant, shrub, or tree, or *any other body*, than that they should be decomposed and return to air again. This we see performed every day: for instance, the candle by which I now write is continually diminishing and returning to the great reservoir of nature, and there being worked up, will become the food of vegetables, which being eaten by the ox becomes a part of his tallow, and it being made into candles, may at a future period afford me light to write a second time. If our theory be true, it follows that all vegetables are produced in their great variety by different kinds of air, which the chemists of the present day would call inflammable air, vital or pure air, and mephitic or impure air. These different airs being combined in the different organic strainers in a manner yet inexplicable, composes their different substances, and supports them in their vegetation, growth, and propagation. By some late experiments it appears that fixed air, called by chemists *carbonic gas*, and is the same air which makes beer or cider foam when poured out of a bottle into a glass, or which makes the emptyings or yeast raise the flour, or the springs of Saratoga and Ballston do the same, *is very favorable to vegetation*.

---

* As a small proportion of earth is found in all water, and a small proportion of earth in all plants, being analyzed, *it is not designed* to exclude this earth, [the ash of plants,] found in all water, from the nourishment of plants.

"Ashes have a very powerful effect in the southern part of the State, as a manure, although they are not a putrified substance. The salts of ashes, called by chemists alkali, have the power of attracting the nitrous air from the atmosphere in great abundance. This is seen by boiling water leached from earth taken from covered places, where as soon as you add a little lye from ashes, the *nitre*, which before adhered to the earthy parts in the water, immediately disengages itself from the earthy parts suspended in the water, and adheres to the lye, which makes the saltpetre we use, and which is one of the most powerful manures. Again, if a heap of dirt is put under cover and frequently sprinkled with lye, the attraction of nitre from the atmosphere will be so great, that in a short time the heap will be covered with nitre, in appearance to hoar frost. This nitre is part of the air, [true,] and being found by experience to be good manure, must be a part of the vegetable production, which when decompounded, or becoming dissolved by putrefaction or otherwise, returns again into the air. The fixed air (carbonic acid) escaping from all fermented, vegetable substances, as well as from those which are in a putrifying state, shows that fixed air composed a considerable part of their substances, and consequently must be one of the *best* manures.

"If we extend our ideas a little further, and consider that all flesh is grass, as the inspired writer expresses it, and may be literally true, we may safely conclude that all animals as well as vegetables are composed of air and water. The grass is nourished and comes to perfection by these elements, the ox eats the grass, and the man not only eats the ox but vegetables also; and by the various organizations of the plant, ox, and man, their different substances are produced, being originally from the air and water. Dr. PRIESTLY, by his important discoveries, has greatly added to the knowledge of analyzing the air, which is found capable of being divided and separated into all its different parts, and has become a great source of useful knowledge to the world. Physic has been greatly improved by these late discoveries, and by it *persons have been restored to health as by miracle*. The philosophic mind has been delighted in the experiments, in contemplating those marvelous works of nature, which are upheld and directed by infinite Power and Wisdom. The agricultural interest, too, experiences the beneficial effects of these discoveries in procuring manures, by which subsistence for man is afforded from old and worn out fields."

It is worthy of note that, fifty-five years ago, farmers in the Hudson and Mohawk valleys had occasion to complain of "old and worn out fields;" and why ? Because they, like their descendants in our day, thought that the systematic study of nature's laws in their connection with agriculture, was time and money thrown away. Had L'HOMMEDIEU, MITCHELL, LIVINGSTON, DE WIT, WATKINS, BECK, CLINTON, VAN RENSSELAER, and others, been sustained in their patriotic efforts to elevate tillage and husbandry to the dignity of an educated and honorable profession, this whole Republic would now be something like a Paradise to live in. But instead of encouraging the application of science to agriculture, there is not one acre of arable land in the United States dedicated to experimental purposes for the advancement either of the science or the practice of rural economy. For what little we have learned since the above was written in the eighteenth century, we are indebted to the agricultural schools and professors of Europe. We have lost a half century in agricultural progress; for without genuine science there can be no substantial progress. Every school boy should know that practice alone only repeats what practice had before done, so that progress is impossible. An experiment is a search after a thing unknown, or it is no experiment. Such an investigation is prompted, not by practice, but by theory. Theories differ as widely in value as agricultural practice; but while most cultivators are quick to discover defects in practice, all theories of farming appear to them alike worthless, *except their own.* To have a sound theory, one needs large experience in rural affairs, and to be well read in the literature and sciences that appertain to agriculture. Such an one must know that the damage annually done to American soil can not be repaired by any known process for less than three hundred and thirty-six millions of dollars; and that, as the crops grown and removed increase rapidly from year to year, the injury increases in the same ratio. The alkalies that draw nitre from the air, as stated by L'HOMMEDIEU, are now extracted from 112,042,000 acres, and thrown into rivers, lakes, and the ocean, to improve the soil!

In Europe, where ashes are less abundant than in this country, they are extensively used for making artificial nitre beds in conjunction with manure. In forming such beds, care is taken to leave open passages under them for the free passage of air, from which nitrogen is absorbed in forming the nitric acid which combined with potash produces saltpetre, and united to soda forms cubic nitre. To extract the food of plants from the atmosphere, and retain it in the soil in a condition to meet the wants of plants, all alkalies (potash, soda, and ammonia,) and alkaline earths (lime and magnesia,) are invaluable. It is this fact that makes us regret the constant waste of alkalies on farms, in villages, and in cities. Some fancy theorists teach, that barely shading the ground will develop a nitre-bed anywhere, as though potash could be extracted from pure sand or pure clay. This mineral is no better husbanded now in the United States by the mass of citizens in cities and rural districts, than it was sixty years ago; nor is the production of saltpetre in barnyards better understood now than in the time of L'HOMMEDIEU. No satisfactory experiments have been made during the first half of the present century in drawing the nourishment of cultivated crops from the atmosphere, and hence no advancement in knowledge has been achieved in that direction.

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MIXING SOILS AND MANURES.

AN acre of soil, estimated to the depth of ten inches, weighs usually not far from a thousand tons. It is a heavy dressing of common stable manure, equal to thirty loads of over a ton each, which supplies ten tons of solid matter to the acre. Admitting that one applies that quantity, every one hundred grains of soil to the depth of ten inches should have one grain of finely divided manure intimately blended, and perfectly incorporated with it. This is the ideal of garden culture, in which well rotted manure and deep and frequent tillage form a soil of exceeding fertility. In ordinary farming, the manure goes into the ground in comparatively large and isolated masses, while hundreds of pounds of earth may be found without a particle of the applied fertilizer within it. In one place, the roots of plants have an excess of manure; and in another, they are in a starving condition. If it is bad to do without any manure, it is but little better, and often worse, to make so unwise a use of this food of crops. Manure is the elixir of vegetable life—the very "salt of the earth." How, then, ought manure to be prepared? How applied to tilled land, meadows, and pastures?

If all soils, all climates, all manures, and all crops, were alike, nothing would be easier than to lay down rules for the preparation and use of manure, to which there could be but few exceptions in practice. No such uniformity in circumstances exists; and on that account, very much must be left to the sound judgment of the husbandman. There can be no reasonable doubt that manure dissolved in water (a weak solution) can be most evenly diffused through the whole mass of soil to which it is applied. Water holding the organic and inorganic aliment of plants in solution, permeates the earth wherever it is possible for roots to extend. In this condition, their daily nourishment is always ready for use; but when a mass of raw, insoluble dung or vegetable matter, is buried in the earth or spread upon its surface, the case is entirely different. In time, this solid will dissolve; but being in large lumps, the sand, clay, and mould that immediately surrounds the manure, will imbibe it all and leave three-fourths of the soil as devoid of fertilizing atoms as it would be had no manure been spread on the land. All who are familiar with agriculture in districts where the soil is naturally thin, and frequently badly worn, must have seen grass, grain, and other crops, grow in bunches on partially manured fields. This is owing to the extreme unevenness with which the fertilizers have been applied—some plants (a very few) have a feast, others a continuous fast. In all such cases, the manure does not do half the good to the land and its crops that it is capable of; and nothing in tillage and husbandry more needs reform than the defective manner in which soils and manures are mixed together. Composts so covered with loam, mold, ashes, and charcoal, as to lose none of their gases, nor soluble salts, should be rotted sufficiently to break up into fine particles before spreading, plowing in, and harrowing. In this way alone can one readily incorporate manure with clay, sand, and mold, so that it will wholly disappear.

But it is frequently inconvenient to wait for manure of any kind to rot before it is used; and it is desirable to know how it can be best applied. It should be spread with much greater care, broken finer, and distributed evener, than is generally practiced. This rule holds good whether dung is applied as a top-dressing to meadows and pastures, or to plowed, or about to be plowed, lands. The equal diffusion of the fertilizer through the body of the soil from its surface down to the depth at which the roots of crops descend, is the perfection of manuring by the aid of any given quantity. Its extreme division greatly favors its solution in the earth, and the proper feeding of the farmer's needy crops. Some say that the natural tendency of fertilizers is to rise to the surface, and therefore manure should be covered deep with the plow; while others contend that manure naturally sinks with the water that descends to form springs, or runs out in under-drains; and therefore manure should be covered only two or three inches in depth. Both of these statements are partly true and partly erroneous. All the dissolved food of plants both ascends and descends around their roots to nourish and support vegetation. The evaporation of water from the surface of the ground, and from the numerous leaves of plants and forest trees, induces an upward movement of water from the subsoil; but when it rains, or from any cause there is more moisture in the surface soil than in the earth below it, water descends and manure with it, if soluble and present on the surface. The droppings of all animals in a state of nature enrich the land without the aid of the plow or harrow, or being covered with earth. Art and science undertake to do more than unaided nature accomplishes; and a large increase of physical as well as other comforts, is attained. But for some reason, the art and science of agriculture are less studied, and less investigated in a philosophical way, than any other in the whole range of useful knowledge and occupations. The nice adaptation of manures to the peculiar wants of every crop, is a point in farm economy now universally neglected. Defects in soils are attracting some attention; but how to remedy these defects in the cheapest manner, is a desideratum that can never be realized until there is more system in our vague and meaningless researches as practical farmers. What new truths did the three millions of agriculturists in this country develop in the year 1851?

PLOWING IN GREEN CROPS.

When a plant is burnt in the air, the ashes which remain are termed by chemists the *inorganic* constituents; that which is burnt away, the *organic*: and though this definition is not strictly correct, it is sufficiently so for all practical purposes. The great storehouse of the *organic* elements of plants, is the atmosphere; the *inorganic* elements are obtained by plants only from the soil. The amount of produce which a soil destitute of organic matter will annually yield by the disintegration of its inorganic elements, may be considered the *natural yield* of the land. What that amount will be, will depend, within certain limits, on the abundance or scarcity of these mineral constituents of the plants grown; but plants can not grow at all without organic matter, or those elements which the atmosphere will supply. Now, in what quantity will the atmosphere supply these to the plants, providing there is a sufficiency of mineral matter? This depends on the kind of plants, the length of the growing season, and the quantity of rain and number of rainy days in that season. It has indeed been supposed by some eminent chemists, that the atmosphere would supply an *unlimited amount* of organic constituents to the plants, and that therefore the yield of any given crop would be in exact proportion to the quantity of inorganic matter existing in the soil in an assimilable condition;—that, if there were only mineral elements sufficient in an acre for five bushels of wheat and straw, only five bushels would be grown; but if there were sufficient for fifty bushels, a produce of fifty bushels per acre would be obtained. To the first proposition we of course agree, thinking that up to the amount of produce for which the atmosphere supplies sufficient organic matter, the yield will be in exact proportion to the mineral matter available in the soil; so that the point at issue between the "mineral theory" and "ammoniacal theory" advocates, is, the *amount* of organic matter which the atmosphere annually supplies to certain crops,—and there is no subject of more importance connected with agricultural chemistry, affecting as it does the reason of all our systems of agriculture, rotation of crops, the value of manuring substances, and in fact everything connected with agricultural operations.

Without therefore attempting to settle the question as to whether soils are easily exhausted of their mineral constituents or not, we will give some results of experiments by Mr. Lawes, that, so far as wheat is concerned, entirely satisfy us that to obtain *large crops*, it is absolutely necessary *to supply organic matter* in the soil; or, in other words, that the atmosphere will not supply sufficient organic matter for a *large crop* of wheat.

The experiments were commenced in 1843. The soil a rather heavy loam, or what is generally known as a good wheat soil. Four grain crops were taken from the field the four years preceding the experiment, without any manure of any kind being supplied. The field devoted to the experiments contains fourteen acres. It is divided into thirty-three portions, which have been sown with wheat (and the whole crop of wheat and straw removed) every year. One plot has been left unmanured since the commencement; another supplied with fourteen tons of barn-yard manure per acre each year, and one with the ashes of fourteen tons of barn-yard manure; some with "Liebig's Patent Wheat Manure," and others with all kinds of chemical mineral manures, alone and in various combinations; some with rice at the rate of one ton per acre, rape cake in various quantities, and sulphate and muriate of ammonia alone and in conjunction with all kinds of mineral manures. The detailed results of such extensive experiments can not of course be given; and in fact, a mere summary of them would occupy more room than our space will admit. Suffice it to say, then, that the *average* yield of dressed grain per acre, of seven successive crops on the continuously unmanured plot, was 17¾ bushels. The average yield of nine plots, the first year dressed with a variety of artificial mineral manures corresponding to the ash of wheat and straw, was 16¾ bushels.

The ashes of fourteen tons of barn-yard manure, gave 16 bushels. The average of the seven years on the plot dressed with fourteen tons of barn-yard manure per acre each year, was 28 bushels. An acre dressed with 168 lbs. each of sulphate and muriate of ammonia, gave 33¼ bushels; another, with 150 lbs. each of sulphate and muriate of ammonia, 25¾ bushels; while a plot by the side of it, dressed with 150 lbs. each of sulphate and muriate of ammonia, and 300 lbs. potass, 200 lbs. soda, 100 lbs. sulphate of magnesia, 200 lbs. calcined bones, and 150 lbs. sulphuric acid, gave 25 bushels. Again, with 200 lbs. each of sulphate and muriate of ammonia, we get 32¾ bushels; while 300 lbs. potass, 200 lbs. soda, 100 lbs. sulphate of magnesia, and 200 lbs. calcined bone dust, with 150 lbs. sulphuric acid, gave 17¾ bushels. 224 lbs. sulphate of ammonia gave 27¼ bushels. 224 lbs. sulphate of ammonia, and the ashes of three loads of wheat straw, gave 27 bushels.

These results, which we have selected as showing the general indications of the experiments, will throw much light on our point—What amount of organic matter will the atmosphere supply to a wheat crop on a soil having an abundance of inorganic constituents? The average crop on the continually unmanured acre was 17¾ bushels; and where *inorganic* or *ash constituents* were supplied, the crop was not increased. But when a salt of ammonia is used, the crop in some instances was doubled; and in no instance during the whole course of the experiments, has ammonia been used without *greatly increasing the crop.* On one acre where ammoniacal salts alone were used, the average yield of six successive crops was 27 bushels. This clearly shows that there was abundance of inorganic matter in the soil, but that for want of organic matter the plants could not assimilate them. It can not be said that the wheat was not in favorable circumstances for collecting organic matter from the air, for the land was always plowed twice previous to sowing, and during the spring the crop was hand-hoed twice, and sometimes thrice, care being taken to have all the plots hoed at the same time and treated similarly in every mechanical operation.

We therefore conclude that, though a soil has an abundance of every inorganic constituent of the wheat plant in an available condition for 40 bushels per acre, yet if there is not a corresponding sufficiency of organic matter, but the plant is dependent solely on the atmosphere, a crop averaging about 17 bushels only will be obtained; and this may be considered the natural yield of a soil, organic matter being derived from the atmosphere sufficient for this amount. If we wish to increase this yield, we must get an artificial supply, or an accumulation, of organic matter in the soil; and as organic matter consists of four elements—oxygen, carbon, hydrogen, and nitrogen—it is important to know which of these is the most essential. In the experiments above given, where 14 tons of barn-yard manure were each year used per acre, an average crop of 28 bushels was obtained; and where ammoniacal salts alone were used for six years, an average of 27 bushels. Now, besides a large amount of *inorganic matter*, the 14 tons of barn-yard manure contained an immense amount of organic matter—carbon, oxygen, hydrogen, and nitrogen—and from the fact that the ammoniacal salts alone did as much good as the minerals, carbon, and ammonia in the dung, we conclude that ammonia (hydrogen and nitrogen) is the only organic matter that need be supplied to the wheat crop. The rice, rape cake, and other carbonaceous manures used in the experiments, did good only in a corresponding proportion to the nitrogen they contained. So that, to increase our wheat crops over 17 bushels per acre, we must in some shape or other supply *ammonia;* or, what is equivalent, nitrogen.

To obtain this ammonia, is the great difficulty in the way of *increasing* our wheat crop. In Great Britain, immense quantities are purchased in the form of Peruvian guano, and sulphate and muriate of ammonia; and highly *nitrogenous* artificial foods are purchased for cattle, which make a manure containing a high per centage of ammonia. By this means their average wheat crop is nearly as much again as ours. Since the introduction of free trade, and the consequent reduction in the price of agricultural products, it is asserted that this "high farming" is attended with low profits. Be that as it may, if the use of guano and the consumption of oilcake does not abate, it will be pretty good evidence that it is found profitable with prices but little higher than our own.

The reader will wonder what this has to do with plowing in green crops. Much, every way. The reason of the benefit of a crop of clover plowed in for a crop of wheat, is rather a difficult thing to see if we adopt the mineral theory; for there is no evidence to show but what the wheat plant can extract the mineral elements from the soil as well as the clover plant; and therefore, if there is inorganic matter for the clover, there is for the wheat: for both plants require precisely the same elements. It is said that clover roots descend further into the subsoil, and bring up these fertilizers from below, and thus supply the following wheat crop. But why will not the wheat roots obtain this?—we have seen several wheat roots six feet long, and one *nine* feet; and believe when the wheat plant is strong and healthy, that its roots descend as low as do those of clover.

Abandoning the mineral theory and adopting the ammoniacal one, we have at once a satisfactory reason for the benefit of clover and other green crops plowed in as a manure for wheat. To increase our crop of wheat, we must supply ammonia. Now, when we plow in a crop of clover, this is just what we do supply. We do not gain minerals by the operation, as they already existed in the soil, and some have perhaps been removed by a crop of hay the previous summer; but the clover obtains *ammonia* from the atmosphere, which becomes organized in the roots, stems, and leaves of the plant; and when they are plowed in, they decompose, and furnish ammonia for the wheat crop. A crop of red clover that would make a ton and a half of hay, would contain 60 lbs. of nitrogen, and according to the results of Mr. LAWES' experiments, would, if plowed in, increase the following wheat crop twelve bushels per acre; and this without taking the roots into consideration, which would probably contain half as much nitrogen as the last crop of clover. This would make *an increase of eighteen bushels per acre*, as the benefit of growing clover and plowing it in.

The proper time to turn in the clover, is just before flowering; it is then full of rich nitrogenous fluids: whereas, in the act of flowering, nitrogen is evolved, and the clover is not so good either for hay or manure. This fact will also indicate the proper time for cutting clover for hay. If allowed to stand until after it has flowered, not only will there be a loss of nitrogen, but the soluble saccharine matter will be converted into insoluble starch and innutritious woody fibre.

In deciding on the economy of plowing in clover for manure, or converting it into hay, we have to consider its effect on the wheat crop, the price of the wheat, the value of the hay, and what it would cost to obtain manure in some other way. We have just purchased guano in New York, for experimental purposes; it cost us there $50 per ton; and if it contains 16 per cent. of ammonia, we shall consider it a first rate article. This is paying 15 cents per pound for ammonia. Now, we have said that a crop of clover which would make a ton of hay, would contain about 40 lbs. of nitrogen, equal to about 48 lbs. of ammonia. This at 15 cents per pound would be $7.20, as the value of a ton of clover hay for manuring purposes; and if plowed in, it would increase the wheat crop 8 bushels. But there is another view of the subject. Besides nitrogen, clover contains a large amount of carbon, oxygen, and hydrogen, so united with each other and nitrogen as to form valuable food for animals, though the first three elements are not necessary as food for the wheat plant, as has been before shown. Now, if this clover is consumed at home by horses, sheep, &c., these elements will be used in the animal economy, and nearly all the nitrogen will be voided in the liquid and solid excrements, (principally in the former,) which, if carefully husbanded, can be returned to the field without much loss.

Besides clover, there are many other crops which are grown for plowing in as manure. Their value for such a purpose is always in proportion to the amount of nitrogen they extract from the atmosphere; and as all the cereals consume nitrogen rather than collect it, they should never be grown for this purpose. Such are oats, buckwheat, rye, corn, timothy, &c. Peas and tares collect large quantities of nitrogen, and might be profitably grown for the purpose of plowing in while green. Rape is often grown in England for plowing under; but it requires rich land to produce a good crop, and we can not recommend it. Spurry, white lupins, borage, and many other plants, are grown in Europe for manure; but none of them have been fairly tried in this country, and we therefore can not speak of their respective merits. On the whole, we know of nothing at present so well suited to our soil and climate, and so valuable either as food for stock or plowing in as manure for wheat, as red clover; and we would most earnestly recommend its more extensive culture in the place of the cereal timothy, especially on all wheat farms. We do not wish to see large crops of clover grown, converted into hay, and sold off the farm, unless manure be purchased in return in equal proportion, knowing that such a course must soon exhaust the land of the *mineral elements;* but if the clover is consumed on the farm by stock, or plowed in as manure, and nothing but the grain of wheat sold off the farm, we apprehend no such exhaustion.

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THE FATTING QUALITIES OF DIFFERENT BREEDS OF SHEEP.

In deciding on the merits of any breed of sheep, it is of course necessary to consider the object for which they are specially kept — whether for wool, tallow, or mutton, and the relative prices of these products. Thus, in England, mutton seldom sells for less than twelve cents per pound, while the best refined tallow is worth but seven cents, and wool twenty four cents per pound. Under these circumstances, it is evident the farmer will keep that breed of sheep which yields the most mutton of a superior quality with the least consumption of food, while tallow and wool-making qualities will be minor considerations. In this country, the circumstances of the case are just the reverse — wool of the same quality is worth more here than in England, while tallow is usually worth twice as much as mutton.

We make these remarks to introduce to our readers some results of experiments recently published by Mr. Lawes, on the "Comparative fatting qualities of different breeds of Sheep;" and though only two breeds have yet been tried, the facts brought to light can not fail to interest our readers. The breeds taken were the Hampshire and Sussex Downs. Forty animals of each breed, selected from the best flocks in Great Britain, were placed side by side upon rafters, in a long shed. They were fed with oilcake, clover hay cut fine, and ruta baga. The average weight of the Hampshire sheep when put up, (November 7,) was 113 lbs. per head; that of the Sussex sheep was 83 lbs. The amount of oilcake and clover chaff allowed them was in proportion to their live weight. Thus, the forty Hampshires were allowed forty pounds of oilcake and forty pounds of clover chaff per day; and to the Sussex, thirty-two pounds of oilcake and thirty-two of clover chaff. Ruta bagas were allowed them *ad libitum.* The entire period of the experiment was twenty-six weeks. The average weekly consumption of ruta bagas per head of the Hampshires, was 106 lbs.; and of the Sussex, 79 lbs.: or, for 100 lbs. live weight of animal of the Hampshires, 71½ lbs.; and of the Sussex, 69 lbs. The average weekly increase per head was, of the Hampshires, 2 lbs. 12 oz.; and of the Sussex, 2 lbs. 2 oz.: or, for each 100 lbs. live weight of animal of the Hampshires, 1 lb. 14 oz.; and of the Sussex, 1 lb. 11 oz. From these figures it is evident the Hampshires lay on fat quicker than the Sussex; but the question is, which breed produces the most increase from a given amount of food. The following table will show the amount of food consumed by each breed, to produce 100 lbs. increase:

TABLE, SHOWING THE AVERAGE FOOD CONSUMED TO PRODUCE 100 LBS. INCREASE DURING THE PERIOD OF 26 WEEKS.

	Oil Cake.		Clover.		Ruta Baga
	lbs.	oz.	lbs.	oz.	lbs.
Sussex,	314	4	304	3	4086
Hampshire,	294	0	259	12	3941
More food required by Sussex sheep,	20	4	44	7	145

From this table it will be seen that the Sussex sheep, to produce 100 lbs. increase of animal, required 20¼ lbs. more oilcake, 44½ lbs. more clover, and 145 lbs. more ruta bagas, than the Hampshires. The average weight of wool per head was, from the Hampshires, 6 lbs. 4 oz.; and from the Sussex, 5 lbs. 10 oz. The proportion of wool to 100 lbs. live weight of animal was, for the Hampshires, 3¾ lbs.; and for the Sussex, 4½ lbs. The average weight per head of the Hampshires when fat, including wool, was 183 lbs.; and that of the Sussex, 141 lbs. The average weight of carcass of the Hampshires was 101 lbs. 14 oz.; of the Sussex, 76 lbs. 13 oz. The average weight of offal per head was, from the Hampshires, 12 lbs. 4 oz.; from the Sussex, 9 lbs. 10 oz. The exact age of the sheep is not stated; but as they are called lambs, we presume when killed they were about fifteen months old.

Of the money results of the experiments we need not speak; it depends on the price of oilcake and the cost of raising clover and ruta bagas. In England, however, it is considered profitable, when fatting sheep on ruta bagas as the principal food, to give them oilcake and clover chaff, providing the increased value of the sheep is sufficient to pay for the additional food; the value of the manure, which is much improved by the oilcake, more than paying for the ruta bagas and cost of attendance.

Of the value of these two breeds of sheep our readers will be able to draw their own conclusions from this summary of results given. It is evident that the consumption of food per 100 lbs. live weight of animal is nearly identical in both cases, and that the Hampshire will give a greater increase for this food than the Sussex sheep. The Sussex, however, produced the most wool, which sold for one cent per pound more than the Hampshire. Our own conclusions from these experiments are, that the Hampshires will be found more profitable for this country than the Sussex.

Mr. LAWES is now trying experiments between the Cotswold and New Oxford, and the Lincolnshire and Leicestershire breeds. He informs us in a private letter, that so far as increase of animal from a given amount of food is concerned, the Cotswold are superior to the New Oxford and both the Hampshire and Sussex downs. In an experiment on Hampshire downs, on the nutritive value of different foods, Mr. LAWES found that, sheep weighing 121½ lbs. at the commencement of the experiment, consumed 7 lbs. of oilcake and 22 lbs. of clover hay per head per week, and increased 30¼ lbs. in 19 weeks, or 1 lb. 9½ oz. per head per week. The same kind of sheep by the side of these, fed with linseed and clover hay, and weighing when put up exactly the same as the others, consumed 7 lbs. of linseed and 20 lbs. of clover hay, and increased in 19 weeks 28½ lbs., or 1½ lbs. per head per week.

The oilcake used in all these experiments was American, which contains more nitrogen, and sells for a higher price, (at present it is worth $40 per ton,) than the English. The English contains more oil than the American. This, however, does not materially increase its value; for it will be seen that, *weight for weight*, the cake which is left after the oil is pressed out of the linseed, is more fatting than the linseed itself. This, so far as we have seen, has been the result of every trustworthy experiment on the relative value of oilcake and linseed as food for animals. It would indicate that oil is not of such a fatting nature as has been generally supposed.

Condensed Correspondence.

Salt *vs.* Fire.—In the November number of the *Farmer* for last year, I noticed a communication relative to the burning of a barn, as was supposed, by spontaneous combustion, produced by the grain being drawn in too damp. Your answer directed that the hay and grain should be thoroughly dried before storing. This is good advice when it can be adopted without the hazard of grown wheat, and bleached and half rotten hay; but there are times (instance the last two seasons) when this seems impossible. Now, permit me, with due deference to your superior knowledge and ability, to suggest a preventive to you and the readers of the *Farmer*, which I have adopted with much confidence for some years past. I refer to salting both hay and grain when drawn in. This to some extent has been practiced among farmers in these parts, but perhaps by few, if any, with a view to this idea. And it is doubtless attended with other advantages. It is a well known principle of chemistry, that substances in passing from a denser to a rarer state, produce cold, as salt, snow, &c.; and this, so far as I know, seems to be somewhat peculiar to salt. Who is not acquainted with the sensation of cold felt upon immersing the hand in strong brine. Numerous illustrative examples might be given, but let this one suffice. South Bristol.

Sheep Frauds.—We have seen statements published in agricultural journals, by Vermont wool-growers, bragging of their sheep and fine wool, and challenging the world to produce their equal. Such assertions are a touch beyond the exaggerating advertisements of quack doctors, puffing their nostrums. These nauseous assertions, like bitter pills, require oiling, as they do their sheep, before the farmers of the west can be made to swallow any more of them. Now, if their wool is as good as they have represented it to be, will you, Messrs. Editors, or some of your Vermont subscribers, be so kind as to tell us, through the *Farmer*, why it is that the greater part of last year's clip of Vermont wool was still in the hands of the growers, unsold, on the first of March last? and why it is that the manufacturers purchase up all the wool about the country at shearing time, and pass by Vermont wool as unworthy of their notice? The dear bought experience the farmers of the west have had for the past two years, in purchasing eastern sheep at prices much above their value, compels us to state that many of their sheep, like their wool, have proved very different from what they were represented to be. The sheep pedlars cut the eye teeth of many of our farmers, which has created a great distrust in anything that writers or pedlars may say respecting their sheep, and now we are all on the look-out for sharpers. A.—*Ann Arbor, Mich.*

Ruta Baga and Mangel Wurzel.—I have been in the habit of raising about half an acre of ruta baga for several years, and think them indispensable for my flock of breeding sheep in the spring. I usually sow them the last week in June, in rows about thirty inches apart, and hoe them out ten inches in the rows. I have never used superphosphate of lime, but if sufficient to manure an acre can be made by the farmer himself for four dollars, as you say in the March number, I should think if it does as much good as you say it does for root crops, that it is much cheaper than barn-yard manure. I usually get about three hundred bushels of ruta baga from the half acre. I have never grown mangel wurzel, but as you so strongly recommend them in the March number, I mean to plant a quarter of an acre this year, by way of experiment. You say that "though this root contains about 87 per cent. of water, yet more nutritive matter can be obtained per acre from this crop than any other." I certainly should not have thought that roots contained 87 lbs. of water in every 100; but you say that ruta baga contain even more water than mangel wurzel, and that even green clover contains 80 per cent. of water.

I was not a little surprised at the amount of water a crop of clover exhales during its growth, from an acre of land—no less than 430 tons, or 8600 lbs., per day. Truly, plants require, or at least take their food in a very diluted state. And it would seem, as you say, that this amount of water, impregnated as it is with carbonic acid and ammonia, is capable of taking up every element that enters into the composition of the plant, even the most insoluble. A Constant Reader.—*Dutchess Co., N. Y.*

Growing Melons.—Perhaps it would interest some of you readers to know of a method of cultivating melons which I have practiced very successfully for the past three or four years. For some reason they do not ordinarily ripen well in this region when planted, as on Long Island or in New Jersey, in the open air. I have first dug holes two and a half feet deep and three or four in diameter; into this, the last of April, I have thrown stable manure, such as is used for hot-beds, three or four wheel-barrowfuls. On the top of this I place a box, shaped like the box of a hot-bed, but only large enough to require four panes of 8 by 10 glass, and in the box I place six or eight inches of sand, with ashes and charcoal, and hoe the dirt around the box in the form of a neat mound. After a few days I plant my melon seeds, enough to give me a selection of the best plants, leaving but three in a hill when fully grown. In the sides of the box may be sown tomato seed, as in a hot-bed. The result has been, that my melons and tomatoes have ripened two or three weeks earlier than they would otherwise have done, and in great profusion. F.—*Homer, N. Y.*

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Sweet Potatoes.—I have been raising sweet potatoes for the last seven or eight years, and for the most of that time have experienced much difficulty and loss in wintering the seed for the next year's crop; but I now feel much gratified in being able to inform you and the public, that all the extra labor which I believe to be generally thought necessary to preserve the seed over winter, is entirely unnecessary and worse than useless, of which I have been growing suspicious for several years past. Last fall I adopted the following mode, with complete success and entire satisfaction:

I dug my potatoes during a spell of nice Indian Summer, about the first week in October. They were handled carefully, taking care to bruise them or fracture the skin as little as possible, (which I think as necessary as in the management of keeping apples,) and spread on a clean sod and exposed to the sun for from a week to ten days. I then carefully gathered twenty-six bushels of them in a basket, carried them up stairs, laid them away in barrels and boxes, and covered them up with old carpets, bags, or anything to keep the air from them. When the winter began to set in cold, I collected them around the stove-pipe and chimney, and covered them all over in a body with boards and other covering extending down to the floor, thus husbanding all the heat that might arise through the course of the day from the pipe and through the floor, which were considerable, as they were located over a cook stove in which there was generally fire from five o'clock in the morning until nine or ten at night. During some of those coldest days and nights, (of which some were extremely cold—from 12 to 15 deg. below zero,) the heat was so great on those boxes and barrels nearest the pipe, say within six inches, that I could scarcely bear to hold my hand on them at that point. There were two barrels, furthest from the fire, that were touched with the frost a little, which I overhauled in February. I believe I can safely say the whole loss on the twenty-six bushels, including those that were frost-bitten and a few small ones dried up by the excessive heat, did not exceed five pecks. I now have thirteen bushels of them in hot-beds, and offer the plants at fifty cents per hundred, or four dollars per thousand.

I discover that by putting them in large quantities together when fresh dug, they will ferment, or go through a sweating process, which is very injurious, in which I believe the milk is more or less converted into water, and the saccharine principle more or less destroyed, thereby unfitting them either for the table or to keep. It is the opinion of many that they are fit to eat only while fresh—that they get to be out of season, &c.; but this is a mistake. On the other hand, the longer they are kept, the sweeter and more delicately flavored they become, as I argue, from the greater concentration of the saccharine matter as the water evaporates.

There is another false opinion more or less in circulation, in regard to eastern and western grown potatoes, which is, that the eastern grown are sweeter and better than the western grown tubers. This idea was strongly advanced to me one year ago last fall, in Buffalo. On the contrary, I believe what little difference there may be, if any, is in favor of the western grown; in defence of which position, let me advance a short statement, which is this: The Irish potato, as it is called, which is raised in this country, is more delicately flavored than those of the eastern States. This opinion I believe is universally admitted here. I think the cause is in the soil—this being light and loamy, and that heavy clay and gravel;—the one being in a state of nature—rich, fertile, and fat; the other, barren, sterile, and poor in comparison. This I have tried, in the article of beets, in my garden, which in the natural state is a stiff yellow clay. At the first improvement of it, I hauled upon it enough of wettish prairie soil (I can not call it muck) to make two or three beds. The following season was quite a dry one, and the beets which we grew in the clay soil were so bitter we could scarcely eat them, while those of the same seed and variety which grew in the prairie soil, were mild and sweet. I conclude from analogy, that the western grown sweet potatoes are likely to be the sweetest and best.

Now, a word as to what may be the cause of this false opinion expressed in Buffalo, concerning western grown potatoes. May it not be from the fact that in the west there are a great many varieties of them grown, and many of them of inferior quality, each variety being different almost as apples. Sweet potato amatures have represented to me that the very best varieties are the *Yellow Spanish* and the *Red Spanish*, and that there is little difference between them, some choosing the one and some the other.

Last season I planted from the 10th of June to the 10th of July; the last planted were of course not very large, but paid very well. I believe there are more failures from having the ground too rich than too poor. If manure is thought to be necessary, spread on and plow it in deep, then harrow well, ridge up three furrows together three and a half feet apart, and set the plants from a foot to eighteen inches apart. Keep them clean, the vines loose from the ground in all other places except at the original root, and the ground well ridged up, and you may expect five bushels to the hundred sprouts, if planted by the 10th of June. CYRUS MOORE.—*Port Clinton, Mich.*

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GAPES IN CHICKENS.—As my husband is a subscriber and constant reader of your valuable paper, you will, I hope, pardon the liberty I take in addressing you a short article on the subject of "Gapes in Chickens," which, if you should consider worthy a place in your pages, you are welcome to lay before your numerous readers, for the consideration of those who have been learning by dear experience (as I think I have learned) the nature of this troublesome disease. I have been induced to write this from having seen no answer to the numerous inquiries on this subject, that were satisfactory to my mind. One writer attributes gapes to giving chickens wet food; another, to sour food; another to light bread; &c. These theories may all be correct; but from several years' experience in the rearing of chickens, I am persuaded that the food has but little to do with preventing, producing, or curing gapes, since the same results have been produced from giving a dozen different kinds of food prepared in nearly as many different ways.

As many persons who raise fowls appear entirely ignorant of the nature of this disease, I will state plainly my views. The constant gaping is the consequence of an effort on the part of the chicken to expel a knot of small worms, which I have always found in the windpipe, (and not in the gullet, or meat-pipe, as many suppose,) at its lower extremity, where it joins the lungs. Their location appears very evident from the fact that they prevent respiration, and hence the effort to expel them.

The Cause.—I have never yet been able to detect any other cause for this disease than *cold*, as the chicks are always affected during or soon after cold, wet weather, and never in good weather.

The Cure.—I have tried all the prescriptions that have been recommended by the most learned "doctors" who have written on this subject, through the agricultural press—black and Cayenne pepper, Jerusalem oak, spirits turpentine, and a host of other nostrums, that have had no other effect than to assist the little sufferers off. I have also tried to extract the worms with a wire; but this I consider very unsafe, as it kills as many as it cures. I have also tried a feather, with no better success; as one stiff enough to extract the worms is very apt to destroy the chicken. My present remedy, however, has never failed in a single instance, if taken in time. It is this: I procure a spear of blue-grass, and after stripping off the seeds, I twist it in my fingers until I get the fibrous branches closely entwined around the main stem; then pulling out the tongue of the chicken until the mouth of the windpipe is presented, I insert the spear of grass, and turning it around several times, until it reaches the lower extremity of the windpipe, I withdraw it with the worms attached. If, however, the worms do not appear to be all extracted, I have a cup of water at hand into which I plunge the beak of the chicken, which causes it to sneeze up the remaining worms that have been loosened by the grass. It is sometimes necessary to insert the grass more than once, especially with "young practitioners." Many persons whom I have instructed how to cure chickens of gapes, have killed every one they attempted to cure; but upon investigation, I have found that they put the grass down the *throat* instead of the *windpipe*. Great care must be taken in this matter.

To prevent Gapes, I have only to observe a little care in cold, damp weather, to keep my young chickens comfortably housed. An eye should also be kept to avoid those causes in the management of fowls which produce degeneracy, since healthy fowls are not liable to disease.

I may not be correct in my theory; if so, I hope to be corrected. One thing, however, is certain; in my *practical treatment* of the disease, I have the satisfaction of knowing that I never lose a single chicken. A. A. J. JONES.—*Bellefonte Landing, Ky.*

HOMES FOR THE POOR.

BY L. T. C. E., OF ONONDAGA HILL, N. Y.

PERMIT me, through your pages, to call the attention of wealthy and philanthropic agriculturists to the importance of providing homes for the poor, particularly that class employed as farm laborers. A large portion of this class of our inhabitants have never had, and never will have without a little assistance, a home of their own; and many of them depend upon shifting their quarters as regularly as the spring returns. The idea of ever owning a home seems to them an impossibility; yet there are few families whose *unnecessary* expenses, in the course of four or five years, do not amount to more than sufficient to purchase a home that would make them as comfortable as the owner of thousands. A man who never expects to earn faster than he spends, will have but little calculation or economy; hence it is that those persons who live in daily want of the necessaries of life, usually spend more time and money at parades, exhibitions, and for all sorts of sight-seeing, than those who have comfortable fortunes. This miserable habit of continually shifting quarters doubtless begets those thriftless, untidy, and not unfrequently dishonest habits, which are almost invariably found connected with extreme poverty. But instead of wondering at these traits of character, when connected with physical and intellectual destitution, we should wonder at the exception. He who has nothing of his own, will not be likely to be very conscientious with regard to what belongs to another; and it is useless to expect a man to have the same care for neatness or economy while residing on the premises of some wealthy landlord—which he is to occupy but for a year or two, or perhaps at the option or caprice of the owner—as he would have if the premises were his own; or that he will have the same inducement for becoming an honest, industrious, and reputable citizen, that he would have if he expected to become a permanent resident. Give a man a snug little cottage, with but an acre of ground well stored with fruit, with his cow, pig, and poultry, and he will have no more disposition to encroach upon his neighbors than if he were worth ten times that amount;—he has *his* rights; he will consequently respect the rights of others. And if he were obliged to pay his own school bills and his share of taxes, however small they might be, his children would be more likely to be sent to school, and kept from breaking windows and committing other depredations upon public property. I do not make this suggestion as grudging any amount that may be expended for the real benefit of the poor, but because whatever is free is generally considered of little value.

But the greatest evil resulting from this unsettled mode of living, is the influence it has in forming the character and habits of children. They are naturally fond of novelty, and moving into a new neighborhood soon becomes with them a very important desideratum; they have never had a home long enough to become attached to one; they have nothing to leave or lose; and every change, even for the worse, will at least gratify their curiosity. If they are naturally active and intelligent, they early acquire an uneasy, roving disposition, which unfits them for perseverance in any pursuit; they get an idea that "the world owes them a living," which they intend to have for the least labor. Some of them will no doubt make very expert gamblers, jugglers, mesmerizers, spirit-knockers, and not a few will become inebriates and felons. If they are dull and lazy, they become tavern-loungers and vagrants, till necessity forces them to seek an asylum in a poor-house; and a majority of the persons who have once resorted to a poor-house for relief, imbibe a fondness for that mode of life, (which requires little exertion and no calculation or forethought,) and become attached to the society which such an asylum always affords, and ready on the slightest pretence to seek admission again within its walls. I have known veteran paupers who boasted of having been in every, or nearly every, poor-house in the State. Their children in turn become paupers; and in this way pauperism will continue to increase *ad infinitum*.

The expense of supporting the poor is every year becoming more and more expensive, with the discouraging and mortifying assurance that the very method taken to relieve them is augmenting their numbers. Now, for economy's sake, if not for the sake of humanity, let as many as possible be provided with homes. No sober, industrious man, who owns the smallest place that could be called a home, ever need fear a poor-house. In case of sickness or casualty, neighbors would render every needful assistance. If every able farmer would assist *but one* laborer in procuring a home, and occasionally give him a little encouragement and advice, he would render him a more important service than if he were to supply his family with bread; besides, it would furnish an example for others of the same class, which they would soon become ashamed not to imitate. An acre of ground could be purchased and a comfortable tenement erected, in almost any agricultural district, for two hundred dollars; and any healthy, industrious laborer could easily pay for it in four annual installments; for an acre of ground, if skillfully cultivated, would in the mean time contribute largely to the support of his family, and furnish those who were not old enough to get work abroad with something to do towards earning their own living. Improving and embellishing a little homestead would also afford the laborer both profit and pleasure during his spare time, which he would otherwise be very likely to spend in the nearest bar-room. What a delightful change would soon be effected in country scenery, if every laborer were provided with a home of his own. Instead of old, dilapidated dwellings and temporary shanties, scarcely affording a shelter, we should see neat little cottages and gardens, snugly ensconced in their groves of fruit trees, sprinkled over the country, forming no unpleasing contrast with the homes of the more opulent.

I believe all children are by nature agriculturists; I never knew *one* who was not fond of cultivating fruit or flowers. And what man or woman is there, who was so fortunate as to have been brought up on an acre of ground, who does not remember the interest they have taken during childhood in some particular tree or flower, and the assiduity with which they labored early and late, in hoeing, weeding, and watering their plants, till they not unfrequently killed the poor things with kindness. I once knew a poor little invalid who was confined to her room, and mostly to her bed, for nearly two years before her death, who had a tin pan filled with earth, kept on a stand at the head of her bed, which she called her garden. This she divided into compartments of various sizes with a little paling made of bits of shingle, and in these she planted seeds producing plants of the smallest growth. These served to employ more or less of her time every day, till they began to droop, or became too large for their small enclosures; then she would have a return of spring—clear up her garden, move her fences, cultivate her ground, and plant again, with as much variation as possible from her former plan, and watch and tend with as much interest as before. Of all other diversions invented to amuse her and relieve the tediousness of her confinement, she would after a time become weary; this alone afforded her a permanent source of enjoyment. I am confident that if children were provided with comfortable homes, with the privilege of cultivating fruits, vegetables, and flowers, (of which they should not only be partakers, but sharers in the profits,) it would prove a far more efficacious as well as a cheaper antidote for juvenile delinquences and vagrancy, than the best disciplined penitentiary that ever existed.

Building poor-houses, and giving old clothes and broken victuals, is poor charity; it debases the recipient, affords only temporary relief, and will never lessen pauperism. The most effectual and only permanent method of helping the poor, consists in helping them to help themselves.

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SOILING CATTLE IN SUMMER.

By soiling, is meant the practice very prevalent in different parts of Europe of keeping cattle in the barn-yard or in stables during summer, and feeding them with green crops. The high price of labor in this country, compared with Europe, is a decided objection to the profitable adoption of the system; yet it is worthy of trial, and we have little doubt that part soiling may be practiced with advantage.

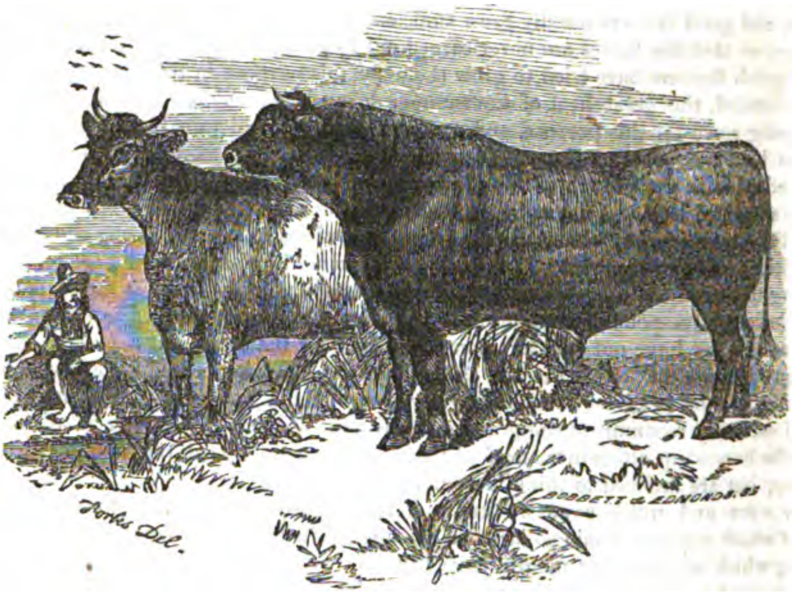
Italian rye grass, lucerne, sainfoin, vetches, and clover, are grown to a great extent in England for the purposes of soiling. Especially are vetches recommended as food for horses, and good farmers usually grow sufficient to supply their teams during the whole summer, so that the horses are never turned out to pasture. We believe several Scotch and English farmers have tried to grow them for this purpose in this country, but have not succeeded, the great heat of the summer being unfavorable. Italian rye grass is now being sown for this purpose, and we think will be found valuable. But clover!—we can beat the world on clover,—the soil and climate of America seems to be peculiarly adapted to the growth of this most nutritious and valuable of all green crops, and we are surprised that it is not more generally grown for soiling purposes. There appears to be little question but what an acre of land mown twice or thrice during the summer, will yield double the amount of food to what it would if pastured and kept bare, with nothing to screen the roots from the scorching hot sun. And doubtless the roots of the plant have a corresponding proportion to the amount of produce yielded in leaves, stems, &c.; so that we have not only an increase of food for the cattle, but a greater amount of vegetable matter left in the soil as food for the following crops. We have always been in the habit of giving our horses green clover in the stable during "nooning," and would earnestly recommend the practice as one that will pay. Whether it will pay to keep the horses up altogether and feed them with green clover during summer, we can not say, but are inclined to think it would.

For oxen and milch cows we know of nothing so well adapted to the climate, and of which you can obtain so large an acreage product, as green corn—directions for sowing which we gave last month, page 160. If you have not yet sown any, it is not too late, and we will warrant it comes in useful. We never knew any one have more than he knew what to do with. It is seldom sown thick enough—four bushels is in our opinion none too much seed per acre, if sown broadcast. It is, too, advisable to sow the corn at different times in the spring, say at intervals of two weeks, so that you will have some just in the right stage to cut during the whole summer; whereas, if you sow the whole at once, you have either to cut some too green or let some get too ripe, and the stalks become pithy and innutritious, and are not relished by the cattle. We do not recommend the practice of growing corn and making it into fodder for winter use. It is a troublesome business curing it properly, and we prefer to get grain as well as stalks in the ordinary way; for though there is probably a destruction of nitrogen, and much of the soluble saccharine matter is converted into woody fibre, in the process of maturing the seed, yet there is doubtless more nutritious matter in *grain* and stalks, than there would have been had it been cut and converted into fodder before the seed was formed.

There is much difference of opinion as to the best method of feeding green corn stalks to milch cows—some good farmers taking them into the pasture and spreading them on the ground, while others object to this plan, saying it makes the cattle restless, that they stand longing at the feeding spot and are always expecting more stalks, and do not disperse and fill themselves with grass. If, however, they are fed regularly every day, and their importunity for more is never complied with, they soon learn that they had better be at other business. Others feed them in the barn-yard, and thus obtain a considerable quantity of manure which would be wasted in the field. The cattle should not be fed with the stalks in too large quantities at a time, or they will be surfeited.

HUNGARIAN CATTLE.

Some time since, we spent an hour very pleasantly at the residence of Roswell L. Colt, of Patterson, New Jersey. His grounds are well laid out, and furnished with rare and fine trees. But what we intend now to call attention to, is his fine Hungarian Cattle, a bull and a cow, which he has named *Kossuth* and *Briska.* They were exhibited by Mr. C. at the late State Fair in this city, where the drawing from which our engraving is made was taken. The committee make the following remarks in their report on these cattle: "The committee consider them as an experiment in this country. Their usefulness has yet to be tested. We highly commend the enterprize that sent them here. We doubt, however, whether as much improvement to our American herds will be secured, as with the British stock which has been generally adopted. We recommend a Diploma and the thanks of the Society to Mr. Colt, for his public spirit in sending them to the exhibition."



HUNGARIAN CATTLE, OWNED BY ROSWELL L. COLT, OF PATTERSON, N. J.

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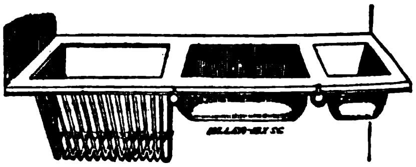
Cast Iron Enamelled Stable-Fittings.—Messrs. Cottam & Hallem, whose splendid castings occupied a prominent position in the crystal palace, exhibited a very beautiful set of stable-fittings—rack, manger, and water-trough, enamelled. They possess the advantages of beauty, durability, and cleanliness, and are certainly well worthy of attention. Wooden fittings are objectionable in many respects—horses gnaw them if they happen to be kept idle in the stable; and if not looked to very carefully, in warm weather especially, they become sour, and prevent horses from feeding well.



STABLE-FITTINGS.

Horticultural Department.

CONDUCTED BY P. BARRY.

THE propagation and culture of fruit trees in the nursery, and the productions of fruits in the garden and orchard, at the present time occupy the attention of a very large number of persons in the United States, and constitute a very important item in the general industry. To the majority of those embarking in it the business is entirely new, and they have everything respecting it to learn. The more experienced, even, have much more to learn than they imagine. It is by no means a simple thing—the work or study of a few weeks or months—that will make a nurseryman, or a fruit-grower, even. We not unfrequently hear people say they would like to send their sons to a nursery for a few months, to learn the business; and a man embarking largely in fruit culture, will sit down and address a dozen inquiries to a horticultural journal, expecting replies that will at once enable him to prosecute the matter successfully. Now, we wish to draw attention to these errors; the sooner people are undeceived in these matters, the better it will be for themselves and the community. We are an apt people, to be sure; still we have to learn our alphabet before we read, and a certain length of time is necessary to learn the simplest mechanical art. Agriculture and horticulture present a much wider field for study, and a much more embarrassing one, than any mechanic art; and yet, strange enough, few people are willing to believe that they can not at once leave the work-shop or the counting-room, and become successful farmers, gardeners, or nurserymen. How many are every year awakened from this delusion, by dear bought experience. A few succeed: they are those who appreciate their want of knowledge, and go to work as zealous and earnest students,—like a man who finds himself in a foreign country, ignorant of the language spoken, and conscious that he can not prosecute his travels with either pleasure or profit, until he has learned it. Such is exactly the position of the man who becomes a tiller of the soil, a grower of wheat or corn, a breeder of stock, a propagator of trees or plants, without previous study and preparation. Nature speaks to him in an unknown tongue; he is continually mistaking one sound for another; blunder after blunder confuse him; and he soon finds he must either leave her and return home to his old pursuit, or at once bend himself down, with dictionary, grammar, and "first lessons," to a study of her language.

"Oh, you are exaggerating!" says a friend. "What mystery is there in farming? Who is so stupid as not to know how to buy himself a farm; a few horses, cows, and implements; plow the land, scatter the seed, and harvest the crops? What simple operations!" Pardon us, dear friend, for suggesting that you ought to have some knowledge of the qualities of soils; or you may buy just such land as some one may be glad to get rid of, but will not suit your purposes. You ought to know something of animals: or you will certainly stock your farm with a collection in which every fault known will be represented. You ought to know something of the feeding of farm stock, and their diseases; or half your animals will die before you are aware of their sickness. You ought to know something of the comparative value of the different varieties of grains and vegetables, that you may plant that which will best suit your market and your soils. There are a thousand other matters you ought to know of, and that you must learn by experience before farming will be profitable. So in gardening;—you will find it unpleasant not to know either how or what to plant. And here the operations are more difficult, because much more numerous, and more minute, and less generally understood. The propagation and culture of trees and plants is a great study—not to be learned in a few months. After some sixteen years' daily and hourly experience, close study, and observation, with opportunities as good as most people have enjoyed, we feel but like an apprentice who had served his first year, and began to know how to handle his tools, and understand their names and uses.

We would have people look less lightly on these pursuits. Young men especially, who aim at acquiring a respectable position in them, should go to work in earnest—begin at the beginning, and discard the fallacious idea that a few months can be any sort of preparation to enter upon this practice successfully. Those who aim at being nurserymen, should go and serve as apprentices for at least three or four years in the best establishments, where they may get a thorough training. To be able merely to put a tree in the ground, or to set a graft or bud, is but a small part of the trade. The time is fast approaching when such acquirements will not do; they will not be sufficient to contend with greater skill, nor will they inspire the community with that confidence without which success can not be attained. A sentiment is fast growing up against quacks, or half-way workmen in any profession, and all such will find themselves run off the track. Reading, study, and observation, continual, are necessary in conjunction with every-day practice.

The growing season is the time to acquire information; everything is active, and yielding to surrounding influences. The effects of soils and manures, dryness and moisture; the attacks of insects and diseases; the habits of growth and bearing of trees; the ripening of fruits; the advantages of different modes of propagation, pruning, and training; and all the various treatment that trees and plants undergo during summer, should be closely watched, and every result be seized upon and turned to account, for the guidance of the future. This applies to every department of cultivation, whether it be the farm, the orchard, the fruit garden, or the flower garden. Our lady friends who are embarking in the culture of flowers for their recreation and amusement, and for the embellishment of their homes, must not rest satisfied with admiration of their beautiful colors or foliage; they must study their habits, observe what soil and treatment suits them best, learn their geography, history, origin, &c., and they will greatly multiply the pleasures and benefits of floriculture.

We hear too many complaints of "barbarous Greek and Latin names;" people want everything easy and ready made. A little study and practice will make the hardest names easy and familiar. The world is wide; nations are various, and speak different languages; the names of people of one country are strange and hard to those of another; but we can not translate them—we must take them as they are. And so with the names of plants, or fruits, or flowers, named by foreigners,—we must learn to pronounce them as we learn other things more difficult.

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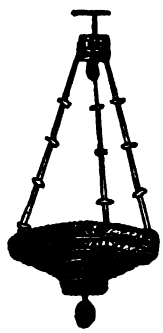
RUSTIC WORK IN GARDENS.

We observe about the country an increased display of huge pieces of carpentry, painted white as snow, and placed in the most conspicuous part of the garden, intended as trellises or supports for climbing plants. Indeed, they are becoming quite *fashionable*—large numbers have been on sale during the spring, in Rochester, and they have become a standing article of commerce. We rejoice at the growing taste and the increased attention to gardening, that make trellises for climbing plants in demand, but we must say we would greatly prefer something more simple, rustic, and natural,—something that would look as though it was merely intended to support a climbing plant, instead of being itself the principal ornament. To our taste, a young cedar tree stripped of the foliage, leaving the bark and branches on, is a much more *beautiful* support for a climbing rose, or honeysuckle, or anything of that kind, than one of these elaborate productions of the carpenter.

When we pass a garden, and see a great painted pyramid of posts and lattice work, with a little, starved, neglected plant somewhere in the grass at its base, the impression is forced upon us, right or wrong, that the proprietor is less a person of true taste than a lover of show — one who has a garden because it is fashionable, more than because it is beautiful. We think better, we confess, of the taste of the poor girl who has the walls of her father's little cabin covered with "morning-glorys" climbing on common strings, than we do of his. We are very far from being opposed to garden embellishments of an architectural kind, but we would insist upon their being in good keeping with the garden; we can not commend the taste that expends ten dollars cheerfully for an "ornament," and one dollar grudgingly for trees or plants.— Great naked pyramids of painted boards and empty iron vases on a naked lawn, are by no means indications of true taste. A garden is no garden, whatever else it may contain, without a profusion of trees, shrubs, and flowers.



We would be glad to see rustic work more generally introduced into gardens. They are cheap, simple, and appropriate, indicative of taste and ingenuity more than wealth or fashion, and more in harmony with the plain and simple character of our village and country gardens, than those of an expensive or elaborate kind. A rustic basket, a lawn filled with verbenas, petunias, or any such long-blooming plants, is a very pretty object. Above we give the figure of one raised on a rustic pedestal. We also annex the figure of a pendant one, which has a very agreeable effect suspended in a room, hall, verandah, or in a green-house. Some very pretty specimens were in Floral Hall at the last New York State Fair, made by Mr. Adam Kachler, of Le Roy. A very pretty pendant one was made of a large oak knot, hollowed out. Others were made of grape vine stems, rough bark, acorns, and fir cones. We shall hereafter give some illustrations of Mr. Kachler's work.

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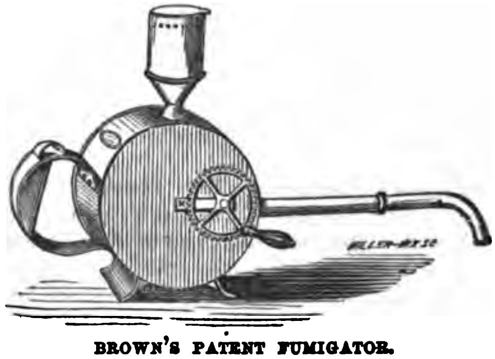
Brown's Patent Fumigator.—This is an excellent English contrivance for fumigating trees and plants, to destroy insects. Tobacco is placed in the magazine at top, and lighted in the same manner as an ordinary smoking-pipe. A draught of air is produced for its combustion by the revolutions of a fan, which draws the smoke in at one part of the cylinder and drives it forcibly out at another in a cool state. It is used in fumigating orchards, fields of turnips, &c., as well as green-houses. It may also be used in cellars, out-houses, &c., wherever insects are troublesome. It is a simple, convenient article, easily used by any one. It is highly recommended by all who have used it in England and this country, and must become of very general utility. It may be had in Boston or New York. The price, we believe, is $5.



BROWN'S PATENT FUMIGATOR.

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The Forsythia Viridissima.—This fine shrub, one of the best of Fortune's collection in China, is now, May 10th, loaded with its gay yellow blossoms. We shall give a description of it next month.

HINTS FOR JUNE.

During the whole of April, and the ea[illegible] part of May, up to the 8th, the weather continued cold and backward, but without frost. Hyacinths in the garden were not in full bloom till the 10th of May; about that time we had a few warm days, the thermometer rising above 80 deg. in the shade. Vegetation pushed with uncommon rapidity, so that on the 12th, trees were quite green and cherries in blossom. The fruit crop here promises well. The transplanting season, though unpleasant throughout, has been long, and gave ample opportunity to all who had labor of that kind to perform.

An immense number of trees have been planted the last fall and the past spring, and we trust they will not be forgotten. To secure a good growth, they must receive constant attention. The ground must be kept clean by frequent dressings, unless mulching has been applied, which is very advantageous in all cases. Sawdust, spent tan, half decayed manure or leaves, are all good mulching material. When the heads have not been properly reduced by pruning at the time of planting, and the trees do not push freely, but seem to flag and linger from debility, the branches should yet be shortened, to reduce the quantity of leaves. People sometimes think it a great hardship to spoil a symmetrical, well branched tree, by pruning; but it is always better to do this than lose it, or stunt its growth during the whole season.

Trees intended to be trained in particular forms should be watched, and all badly placed or superfluous branches pinched off; such as are pushing with too much vigor for their position, should be checked. This is the time to mould the trees into the desired form, and to obviate heavy pruning next winter. Yearling trees that have been cut back to produce pyramids, will now show whether the pruning has been properly done. If not cut back low enough, the top shoots, if left, will rob those below, and the shape will be spoiled. In such cases it will be necessary to pinch the top shoots, to check them and encourage those below; and in some cases it may even be necessary to cut lower down. If they have been cut too low, several shoots of equal vigor will be produced; and in order to give the leader due prominence, the others should be pinched to check them. The same principles will apply to older trees.

Trees budded last autumn, or grafted this spring, will require to have the suckers that always start freely below the bud or graft, promptly removed; in some cases they must be gone over two or three times. The growing bud or graft in many cases will require to be carefully tied up to the stock, or to a stake, to prevent breaking by the wind.

Strawberry beds must be kept clean of weeds, and the runners shortened, to turn the whole strength of the plant to the benefit of the fruit. While the fruit is swelling, a few waterings with liquid manure, and in case of dry weather, an abundance of water, will greatly improve the crop. As the fruit ripens, a little short straw or hay should be spread along the rows, to keep the fruit clean.

Flower Garden, &c.—Tie up neatly all tall-growing herbaceous plants, whose stems are easily broken or blown over. Plant out dahlias any time during the month;—we prefer the last half of June for the finest autumn display. Perpetual roses, and all the bedding plants to be had in pots, may be turned out any time during the month. Among the latter we will mention, as being particularly desirable, the scarlet geraniums, salvias, cupheas, heliotropes, lantanas, plumbagos, veronicas, and zauschneria, besides the indispensable verbenas and petunias. We ought also to add *phloxes*—the new varieties are very beautiful; and if small plants are turned out now, they will give a fine bloom in the autumn. *Annuals* will be ready for transplanting. Do this on a moist, cloudy day, or before a shower, if possible. The dwarf, slender-growing sorts, are best grown in masses, like the verbenas, &c. Weeds must be kept down in all parts of the garden, grass kept closely cut, and gravel walks clean and level by frequent raking and rolling.

Grass edging must be kept cut to prevent them spreading; as little of the raw edge as possible should appear.

Vegetable Garden.—Keep up a constant succession by frequent sowings, of such things as green peas, radishes, and salads, not forgetting to make ample provision for the main autumn crop of all the leading articles. Use liquid manure and water freely in warm, dry weather, or your vegetables will not be fit for the table.

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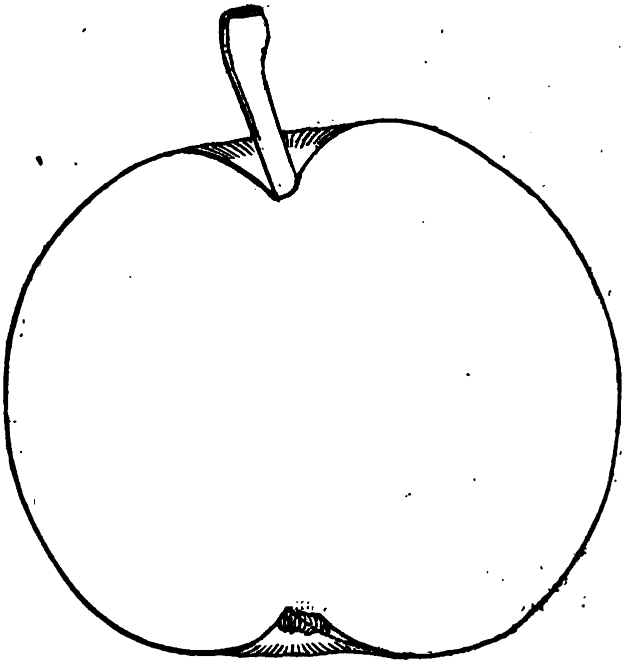
THE EASTER BEURRE PEAR.

This pear has for several years been spoken of, and propagated and planted to some extent in this country, yet it has not attained any considerable popularity. The reason, we apprehend, is, that its merits are very little known. We are glad to be able to speak of it after repeated and pretty extensive trials.

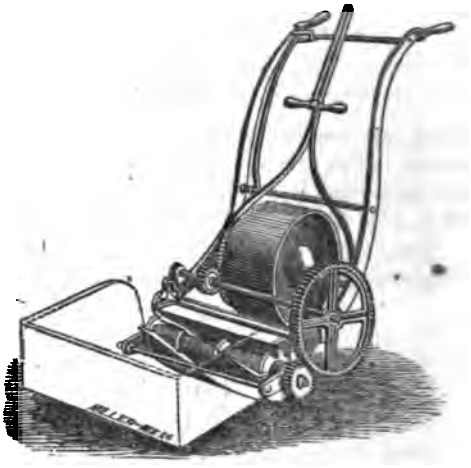


EASTER BEURRE.

The *Easter Beurre*, so far, holds the same rank with us among pears as the *Northern Spy* among apbles — that is, the best long-keeping table variety. We have them now, 17th April, in fine eating order—kept all winter in a cellar, on shelves, bringing them into a warm living-room ten days or so before wanted for use. Like the *Duchesse d'Angouleme*, it has been almost worthless with us on pear stock. We believe it is so in Europe, too; — at least, we have been told so, both in France and England, by experienced men. This accounts for its limited culture in this country; for, until seven or eight years ago, quince stocks were very little used for the pear. Good table winter pears are now attracting attention, and we believe that this variety will soon take its rank. We think that for the south and west it will still be better than for the north, as it seems to require long, clear, warm autumns, to bring out its excellence.

Large, roundish obovate, inclining to oval — large specimens rounder, and smaller ones more oval. *Skin* — rather rough, greenish yellow, with a dull red cheek on well matured specimens. *Stalk* — stout, about three-fourths of an inch long, set in a deep cavity. *Calyx* — closed, in a shallow, plaited basin. *Flesh* — buttery, melting, and high flavored. *Tree* — a fair grower. *Shoots* — reddish spotted. *Leaves* — folded, like those of the *Bartlett*. Exceedingly productive. Keeps till May.

Machine for Cutting Grass Plots.—It is not a little difficult to have a lawn well cut with a common scythe; few people know how to do it; and to those who do it, it is a laborious and tedious operation. A machine that would do it so easily and so well as that described below is said to do, would be of great value. The manufacturers say: "This unique and valuable adjunct to the pleasure ground and garden of the nobleman or gentleman, has now stood the test of twenty years' experience, and continues in as high repute as ever. One house alone have sold over fourteen hundred, which have given universal satisfaction; and is still in good demand. This machine is so easy to manage, that persons unpracticed in the art of mowing may cut the grass on lawns, pleasure grounds, and bowling greens, with ease. It is easily adjusted to cut to any length; and the beauty of its operation is, that it leaves no seam, nor any of the cut grass upon the lawn. Other advantages of this machine are, that the grass may be cut when dry, and consequently it may be used at such hours as are most convenient to the gardener or workman—while the expense of mowing is considerably lessened, as more than double the work may be done with the same manual labor that is requisite with the scythe."



PATENT GRASS-CUTTER.

We saw this article for sale in most of the English Implement Warehouses, and all recommended it highly. We believe this or some similar ones have been introduced here, but we are not aware with what results.

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Horticultural Society of the Genesee Valley.—This Society held its first exhibition of the season on the 11th of May. The contributions were not numerous, but several articles were exhibited in greater perfection than they have before been seen here. The Society has not before ventured a show so early, and hence spring flowers and vegetables have not been brought out. There were—

From Mr. C. J. Ryan—a couple of fine plants, in pots, of the *Spiræa prunifolia*, loaded with its pretty, daisy-like, double flowers; (this plant forces well, and is one of the prettiest garden shrubs that bloom in May; it ought to be in every garden;) a couple of tubs of verbenas; a collection of hyacinths; &c.

From Mr. Jno. Donnellan—a nice collection of pot-plants, including a fine *La Reine* rose; several of the newest and best petunias; two pretty hand boquets; &c.

From Messrs. A. Frost & Co.—fine specimens of *Cryptomeria*, and two large and handsome tree roses in pots.

From Messrs. Ellwanger & Barry—a superb show of thirty named varieties of hyacinths—the most attractive feature of the show; six varieties of crown imperials; a small collection of greenhouse plants, embracing azaleas, cinerarias, rhododendrons, and the beautiful Tropæolum tricolorum.

Mr. Donnellan exhibited fine samples of the *Early Oval Rose* radish, of which we brought the seeds from France; also, of the *Early Frame*; very large *Palestine* lettuce; and a bunch of *Giant* asparagus, surpassing any we have seen in Rochester.

Mr. C. F. Crosman exhibited fine cucumbers, (the only ones shown;) also, fine lettuce, rhubarb, and asparagus; also, a dwarf orange, loaded with fruit.

Beautiful *Northern Spy* apples were shown by Jas. H. Watts, in very tasteful glass jars.

Mr. Van Doorn exhibited some well executed oil paintings of fruits, that were much admired.

The exhibition was well attended, and seemed to give general satisfaction to the visitors.

Ladies' Department.

GOLDEN BARTONIA.

The *Golden Bartonia*, or *Bartonia Aurea*, was introduced into England, from California, in the year 1835, by the botanist Douglas. Mr. D. introduced many beautiful flowers as the result of his botanical tour in California, and this is one of the most beautiful of them all. This excellent botanist was killed a few years after, by falling into a pit made to entrap wild cattle, in the Sandwich Islands. He introduced into England more ornamental annuals than any other collector.

"It is only beneath the bright sunshine," Dr. Lindley observes, "that its splendid flowers unfold. In the early morning, the plant is a shabby bush, with pale, greenish-grey branches, and weedy leaves; but as the sun exercises his influence, the petals gradually unroll, as if in acknowledgment of his power, till every branch is radiant with gold: and so metallic is the lustre of the inside of its petals, that one would really think they must be composed of something more solid and enduring than the delicate and perishable tissue of a flower."

The seed should be sown in a sheltered situation, (as the branches are very brittle, and easily broken by the wind,) in a rich, moist soil.

BARTONIA AUREA.

We give the following valuable article on the *Treatment of Annuals*, from the *London Gardeners' Journal*. It is so good, and so appropriate at this time, that we could not forbear giving the whole article, thus occupying another page with our *Ladies' Department.*

"'My flower-garden is small, but I like to see it gay. I endeavor to make it so, but I never succeed so well as I could wish. I have no convenience for wintering what are called bedding-plants, and my means will not allow me to spend much money in their purchase; but my friends, who know my love for flowers, and are acquainted with my circumstances, tell me I might accomplish a great deal by employing annuals. I have tried them for several seasons, and am not satisfied with the effect they produce. The greater part are so chary of their beauty, that they scarcely retain their charms for a week. Every shower, too, and every breeze, seems to destroy their attractions, and altogether I despair of attaining my object; yet certain, it is, that from annuals I must principally expect my summer display of floral beauty. If you can furnish me with a few hints, and enable me at least to approximate my wishes, I shall be gratified.'

"This note, which we give at length, contains the substance of one or two others which have come to hand on a like subject. At a corresponding season we yearly receive similar communications, and as the information required is of general application, we give our reply in such a manner as will, we trust, benefit not only those directly interested, but many of our readers besides.

"Annuals are calculated to effect much in the summer decoration of a flower-garden: their variety is great. In habit, in foliage, in the color of their flowers, they exhibit a a great diversity, and from among them may be selected such as are suitable for all situations, and to please all tastes. But no plants are, as a general rule, worse treated than annuals. Because they are for the most part easily obtained, and as easily raised, they receive but a scanty amount of attention—certainly not of a nature to develop their proper character and value. As generally met with, they are weak, straggling, and weedy, easily damaged by rain and wind, and generally of but brief duration; yet if proper attention is afforded them in the several stages of their progress, they become highly effective and useful, both for cultivation in the open borders as well as for pots. Many of the kinds are admirably adapted for 'massing.'

"We shall now only speak of hardy kinds, such as may be sown in the borders where they are to flower, or in a reserve garden, and be afterwards removed to their permanent situations. When sown where they are to flower, the prevailing practice is to allow them to remain too thickly, smothering each other in their struggles for light and air, inducing a premature maturity, which of course is followed by their speedy dissolution. As soon as they are fairly above the ground thinning should commence, and be progressively followed up till in the place of fifty or more plants perhaps only five remain. Of course the distance at which it will be necessary to leave them will depend on the kinds, and on the richness of the soil. But the best system with the hardy kinds is to sow them in a spare piece of ground, and prick them out as soon as they are large enough, and only removing them to the flower-borders as vacancies may occur, or as they approach their flowering state; and by thus treating them, a good succession is always obtainable—a point of no mean import where they have to be depended on for a principal item in the summer display.

"In sowing them, a somewhat poor soil should be chosen; and when of a sufficient size to handle, choose a level spot, which can be shaded during the hottest part of the day, and after thoroughly beating or rolling it, to produce a hard surface, place upon it a layer of compost, chiefly composed of leaf-mold, in which plant the young annuals a few inches apart. With proper attention to watering and protection from insects, their progress will be rapid; abundance of roots will be produced, and the hardened surface beneath will preserve their roots from penetrating too far, to render their being transplanted safely. Here they will always be ready for removal to their blooming places. No check will result from their removal if the most ordinary care is observed. Scarcely a root will be lost in the process, and they become effective at once. Should they not be required till fairly in bloom, they may be as safely removed then as at any other time.

"It will be obvious that by a little attention to successional sowing, a supply of good plants may be obtained from the beginning to the end of the season."

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FLOWER SEEDS.—We are still (20th May,) receiving applications for flower seeds. Some of our varieties were exhausted some time ago, and as we obtain our seeds from Paris, we have no opportunity to replenish. We, however, do the best we can with all applicants. At a great outlay of labor and money, we have now sent out seven thousand packages of seeds, averaging about thirteen varieties to each package, of the best annuals grown; and if these are well cared for, and the seed distributed judiciously, our labor will not be in vain.

Editor's Table.

New York State Agricultural Society.—We have received many communications complaining of certain acts of the State Agricultural Society, which we have not published, but we now give one below from one of the oldest and best farmers in Western New York. Among the things complained of is that those who have premiums awarded them must send to Albany for them, instead of receiving payment where the Fair is held. We think this is good ground for complaint. For a month or two after the last Fair not a day passed but from one to half a dozen persons called at our office to know where they could obtain their premiums. These claims were small, ranging from one to five dollars, others were entitled to a copy of Transactions. When informed that they must apply at Albany for their awards, and that the Transactions must be sent to the care of some one on the Express route, and the Express charges paid, a general dissatisfaction was expressed—some declaring they would take no further trouble, but abandon their premiums. We are sorry it is so; yet we believe that until the present feeling is entirely changed, the State Fair will receive very little countenance or support from this section of the State.

Permit me, through the pages of your useful journal, to express my views relative to the management of the New York State Agricultural Society. It appears to me that it does not give the encouragement and patronage to the producers, that was intended that it should do, and which it is capable of doing, provided that it is properly conducted.

An agricultural society is an association of the producing community, embracing all the productions that are useful, ornamental, or ingenious; and the primary object of the society is to elicit facts tested by experience, and circulate practical and useful information, to encourage and stimulate the practical operators to improvement, so as to enable them to produce more and a better quality of the earth's productions and all the various articles and commodities produced, so as to lessen their cost and increase their usefulness to the consumer; and the premiums are for the express purpose of encouraging and stimulating the operators to perfect these great objects.

The Fair is for the purpose of exhibiting all the multifarious productions of industry, art, and skill, in their greatest perfection; so that all who examine them may judge of their value, and learn by the united experience of the past how to improve and increase their productions. And it was expected that the statesman, the scientific, the professional, and the wealthy members of community, who wished to promote useful improvement and advance the interests of society, would attend the Fair and unite with the producers *on true principles of equality*, so as to exhibit by their actions that the cultivator of the soil, the mechanic, and the artizan, are the bone and sinew, and the supporters of society,—the most useful, and ought to be the most honored portion of community;—and also to exhibit to the active and enterprizing youth, that to be a practical operator in any of the useful vocations of life is as honorable as any of the heretofore dignified callings. But it was not so at the State Fair of 1851. The most of those dignitaries who attended were a privileged order—invited guests and honorary officers of the Society. They were provided for and accommodated in extravagant style, at the expense of the Society and the citizens of Rochester; and were decorated with badges of estimation, as though they were of aristocratic blood, which spoke in language plainer than tongue could express, that they, the honored few, were the dignitaries of the realm, and that the producers were inferior beings: and the young men were compelled to see, that to be a practical operator is not the road to honor and distinction.

It never was intended that the State Fair should be a profitable festival to a few, at the expense of the producers; and it is a new principle in the management of agricultural societies, that the officers and wealthy citizens must be hired to attend the exhibition; and if such must be the case, in future we had better do without them, and appropriate the money that they cost to the encouragement of useful improvement.

It was not much of an encomium on the intelligence of our cultivators, that the Society had to send to Illinois and get a politician to preach politics for the improvement of agriculture in the Empire State. And how much it cost the Society, is best known to those who handle the money. There were a hundred men on the ground, that could have given a better and more practical agricultural address. A Plow-Holder.

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Trial of Implements.—We call particular attention to the Trial of Implements by the N. Y. State Ag. Society, at Geneva, in July, the particulars of which will be found in advertisement.

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Tobacco.—In the March and April numbers of your paper you gave directions for the cultivation of tobacco. As I have always considered the *Farmer* devoted to the improvement of the soil and the mind, I am at a loss to know how the cultivation of tobacco is to improve either, when we see that those who do not use the weed have the best health, to say nothing about the filth connected with its use, and the number of tobacco users that lament the day they ever learned to use it. All this is an unanswerable argument against the use of tobacco as a luxury for man. Then why cultivate it? Why impoverish the soil to reproduce that which makes man filthy and diseased? I am surprised that the *Farmer*, which for years has been laboring to improve the taste, and induce its readers to engage in the culture of wholesome and refreshing fruits, beautiful and sweet smelling flowers, should ever have polluted its pages with a description of the culture of tobacco. Had you recommended the culture of Canada thistles or pigeon weed, I could have pardoned you; for, great as the injury of these weeds is to the farmer, they can be turned to some use in the end. Sheep will eat the young thistle when cut and dried as hay, and oil is extracted from the seed of the pigeon weed. I know that a great number of *asses* use tobacco, but I never knew one that grew fat on it.

But if you or your correspondent recommends its culture, then give us some directions for its use. Let us know how large a chew of tobacco a boy may take without killing him; or how long he may suck a cigar before it will puke him. Let us have the picture of a pipe and the outline of a tobacco box, to place by the side of an outline of fruit in the *Farmer*.

What an association there would be between a pear and a plug of tobacco! If ever this world is to return to its Eden-like purity, and ignorance and crime be known no more, then first must tobacco, as well as intoxicating drinks, be banished from the daily use of our young men. And when this is done, then will universally commence the culture of those fruits and flowers that you have so long and earnestly recommended to the readers of the *Farmer*. RICHARD JOHNSON.—*East Groveland, N. Y.*

We give the above a place in our columns, not because we think the strictures called for by anything we have said, or that we have "*polluted our pages*" by giving the best method of raising tobacco. Had we recommended the use of tobacco, or even its general growth, then the case would have been far different, and there would have been some propriety in the censure so liberally bestowed; but, so far from this, although it is not our business as editors of an agricultural journal, to tell men what they shall eat or what they shall drink, yet we have dropped a word or so against the use of tobacco, and even in the article complained of stated "we did not wish to see tobacco raised here as a common crop." We have often wished that, if men would smoke and chew a noxious weed, one could be discovered nasty enough to suit, and less exhausting to the soil than tobacco. But when our readers solicit information on the growth of any crop, we do not feel at liberty to withhold it because we may think the use of the article deleterious. We have now several letters asking the best method of growing hops; and as we feel under obligation to answer these inquiries, we hope our correspondent will not accuse us of encouraging the use of beer. We suppose tobacco will be grown as long as there is a good market for it; and if we tell how it can be grown with the least possible injury to the soil, we shall accomplish some good: but if the world would follow our example as well as our advice, there would be little need for the information.

Inquiries and Answers.

SUPERPHOSPHATE OF LIME.—In your May number, SILAS H. MEACHAM inquires where the superphosphate of lime of good quality may be obtained, and what is the price. You say, in answer, "It is being manufactured by the New Jersey Zinc Co., and is for sale in New York city at 2½ cents per pound," (price of guano.) This manure may be manufactured by Mr. MEACHAM, or any other expert farmer, for less than one cent per pound, and the certainty of having a pure article and saving his 1½ cents to expend in agricultural works.

The plan I adopt to dissolve bones, is to have them ground as fine as I can, put them into a wooden vessel, pour on as much water as will wet them, generally till it rises to the upper surface; then pour in sulphuric acid, 40 lbs. to 100 of bones; stir them frequently, until dissolved. After the bones are dissolved, I mix them with as much earth as will enable me to spread it over the field. The cost will be—

For Bones,	100	lbs., at 1 cent per lb.,..	$1 00
Sulphuric acid,	40	lbs., at 2½ cts. per lb.,..	1 00
Water,	80	lbs., ...	
And we have	220	lbs. of the manure for..	$2 00

and I have not much doubt a better article than the one made by the Zinc Company.

Last year I raised some mangel wurzels, and manured some of them with this manure put in the bottom of the drills, and they were better than where I put barn-yard manure. The above amount of this manure is sufficient for an acre of wheat, which it will improve to the satisfaction of the farmer. The timothy after my wheat thus dressed was the best I ever cut; I think it paid four or five times the cost of the manure. There is no manure made that is so cheap as this superphosphate of lime. S. G.—*London Britain, Pa.*

We have often recommended our readers to preserve bones, and convert them into superphosphate of lime; but, as many farmers have no bone mill in their neighborhood, and getting sulphuric acid is somewhat troublesome, it would be a great advantage to have a good article that could be purchased ready for use at a reasonable price—two and a half cents per pound we think an exorbitant one; and, as it is manufactured from a *mineral* phosphate of lime, and contains no organic matter, the bone-made superphosphate would be a superior article for wheat and other grain crops. It is said, however, that the mineral contains 90 per cent. of bone-earth phosphate, and as bones contain but 45 per cent., the mineral-made superphosphate of lime will be the best article for mangel wurzel, beets, ruta bagas, turnips, and all crops which are particularly benefitted by phosphate of lime.

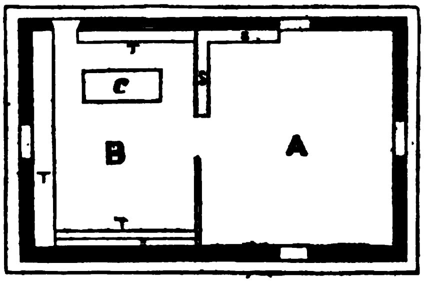
The method of dissolving bones as recommended by our correspondent, is a good one. It is preferable to mix the water with the bones previous to adding the acid, than to mix it with the acid before applying it to the bones.

The term "dissolving bones with acid," is apt to convey a wrong impression of the process. The acid does not dissolve them, but simply converts the phosphate of lime into a bi-phosphate, or super-phosphate, of lime. This it accomplishes by abstracting a portion of the lime, setting free its phosphoric acid, which unites with the undecomposed phosphate, converting it into the bi-phosphate of lime.

The value of the change is this: *Phosphate* of lime is insoluble in water; *bi-phosphate* or *superphosphate* of lime is exceedingly soluble: so that, as plants only take up their constituents in solution, it will be perceived why the superphosphate of lime is so much more efficacious the first year than bones, five bushels of superphosphate of lime producing a larger crop of turnips than fifty bushels of roughly ground bones. Bones undergo a gradual decomposition of themselves, when mixed with the soil, yielding their constituents to the water and plants, the organic matter being soonest in an assimilable condition. Hence, bones applied to wheat are attended with good results in many instances; while superphosphate of lime made from minerals does no good.

It is very questionable whether it will pay to decompose bones with sulphuric acid, to be applied to wheat. Our own opinion is, that it will not,—that the bones would do about as much good without the acid as with it; but for root crops, the superphosphate of lime is the best manure we have ever used. The present month is the proper time for sowing mangel wurzel, beets, and ruta bagas. For these crops the superphosphate, whether from bones or minerals, will be greatly beneficial, and will pay well. (See March number, page 82.)

Dairy, or Milk-House.—I send you a design and specifications for a dairy, or milk-house, which you may give to your readers, if you think it worth a place in your journal, and do not find one answering E. H.'s wants more fully



PLAN OF DAIRY, OR MILK-HOUSE.

The building is 10 by 18, which I think large enough for a private family; but should any one wish to enlarge it, it might be made 10 by 20, or 15 by 25, without altering the plan.

The foundation is laid with stone, and raised 2¼ feet above the surface. Upon this is set the frame, and enclosed by vertical weather boarding. The distance from the stone to the eaves is 8 feet, and to the comb 12 or 14 feet; because a steep roof will turn rain better, last longer, and keep the interior cooler, than a flat one.

A is the front room, used for various purposes—to keep empty vessels in, and such other things as are used about a dairy, and is also a pleasant place in summr to churn in. The floor of this room is laid with plank, level with the top of the stone

Steps lead from this room down to the milk-room, B, the floor of which is laid with brick or stone. Stone I consider preferable, for reasons given hereafter. The dairy table, c, occupies the centre of the room, and is used to place pans upon when the milk is to be skimmed, and also while straining the milk. T, T, T, are troughs, made of stone or cement, in which to place the pans when filled. The water is conveyed to and from these troughs by means of lead pipes.

The cost will vary from $50 to $70; $70 being in my opinion, more than enough to finish in plain style a house of the above mentioned dimensions. The bill of costs might thus be summed up, at the highest prices:

Mason's bill, including stone,	$12 00
600 feet of plank for weather boarding,	6 00
2000 shingles, at $5,	10 00
Carpenter's bill, including nails and glass,	30 00
Sundries, including hire of extra help,	12 00
Amount,	$70 00

I would say to E. H., that he need not be afraid of having too much ventilation. Don't put tan bark about your milk-house, and never allow any decaying matter to come near it. Never put lime into it to absorb any such matter, but apply plenty of cold water, and admit the sun and air plentifully. Lay the floor of the milk-room with stone, as they will not absorb "spilt milk" like brick or wood, and cause an unpleasant odor to pervade the rooms. Make the roof steep, as this tends to keep off the rays of the sun, and leaves the interior cool, and you will have no use for tan bark. Above all things, though, keep your milk-room clean, and then you will not be troubled with the unpleasant thought of having to eat an old dish rag, or other decayed matter, that has been absorbed by your cream. An Ohio Farmer.—*Hillsboro, Ohio.*

To **preserve Girdled Trees.**—In the April number of the Farmer, page 129, J. H. L., of East Charlemont, Mass., inquires if any of your correspondents know how to preserve trees that have been girdled. Tell him to take out a block of wood extending into the bark above and below the girdle, and take from the body or limb of another tree a block corresponding in size and shape, with the bark on, and adjust it in the place, and bind it there, on the principle of engrafting. I have recommended this plan before, and it has proved completely successful. C. Moore.—*Port Clinton, Mich.*

Northern N. Y. Live Stock Insurance Company, Plattsburgh, N. Y. For terms, please apply to agents of the Company.

Superphosphate of Lime

FOR SALE in lots to suit purchasers, warranted pure, at 2½ cts. per pound. LONGETT & GRIFFING,
State Ag. Warehouse, 25 Cliff st., New York.
June, 1852.—6-2t.

Peruvian Guano.

AND other Fertilizers. Several hundred tons of first quality of Peruvian Guano, constantly on hand for sale.
Also, Bone Dust, Plaster of Paris, and Poudrette.
A. B. ALLEN & CO.
April, 1852—tf. 189 and 191 Water st., New York.

NEW AND FINE SHRUBS AND PLANTS.

ELLWANGER & BARRY, Proprietors of the Mount-Hope Nurseries, Rochester, N. Y., solicit the attention of those interested in Ornamental Plants to their large stock of rare and beautiful Shrubs and Plants, among which are the following:

HARDY SHRUBS.

Deutzia Scabra, or Garland Deutzia, a fine white flowering shrub.

Forsythia Viridissima.

Ribes Gordoni—Gordon's Currant—yellow and crimson, very fine.

Spiræa Prunifolia flore pleno—small, double, white flowers in great profusion; fine dense habit.

Spiræa Lanceolata, or Reevesi, one of the finest of the genus.

Spiræa Chamædrifolia, Nicondertí, Lindleyana, Japonica, and twenty others.

Syringa (Philadelphus) *Pubescens, Zepherii, Cordata, Double, Columbiana*, and others, all fine.

Lonicera Ledibouri—a fine Californian shrub.

Tamarix, Africana, Germanica, Gallica, and *Lebanotica.*

Viburnum Lantanoides, a beautiful shrub.

Wiegela Rosea—the finest hardy shrub, lately introduced from China.

The above excellent things can be furnished in quantities, at low prices.

SELECT GREEN-HOUSE AND BEDDING PLANTS.

FUCHSIAS.—Our collection is one of the best in America. The most distinct and best varieties yet introduced and quite rare, such as *Pearl of England, Fair Rosamond, Serratifolia, Serratifolia multiflora, Fulgens Corymbiflora, Corymbiflora Alba, Magnificent, President, President Porcher, Spectabilis*, &c., are propagated largely.

VERBENAS.—A collection of fifty varieties, comprising everything fine introduced to this time.

HELIOTROPES.—*Souvenir de Liege, Corymbosum*, and some new varieties just received and to be announced hereafter.

PLUMBAGO LARPENTÆ.

CUPHEAS.—*Platycentra, Stringulosa*, and others. The first is one of the finest bedding plants.

LANTANAS.—*Ewingi*, the fine new Cincinnati variety, rose and straw color; *Mutabilis Major*, and several others.

BOUVARDIAS.—*Triphylla*, and others.

ABUTILONS.

SALVIAS.—*Splendens Major, Oppositifolia, Azurea*, and others—superb plants for masses.

FABIANA IMBRICATA.

HYDRANGEAS.—*Hortensis, Japonica, Cordata, &c.*

BUDDLEA LINDLEYANA—a fine shrubby plant with large clusters of purplish lilac flowers; blooms in the autumn.

HABROTHAMNUS ELEGANS—a superb plant, half shrubby, with large clusters of showy crimson flowers; blooms equally well in the open ground in autumn, and in the house in winter.

PETUNIAS.—A large collection, embracing all distinct and good sorts.

LOBELIA FULGENS INSIGNIS, LOBELIA FULGENS ALBA—flowers of dazzling beauty—both new.

VERONICA LINDLEYANA—a charming autumn flowering plant; long elegant spikes of pale (nearly white) blossoms. *Veronica Andersoni*—finest of all—*new.*

TREE VIOLETS—white and purple.

CHRYSANTHEMUMS.—A fine collection of the novel and beautiful pompone or dwarf varieties.

DAHLIAS.—A superb collection, including the English and French prize sorts of 1851—all at very low rates.

CINERARIAS.—A fine collection of new and beautiful sorts, including *Magnificent, Attilla, David Copperfield, Wellington, Beauty of Newington, &c. &c.*

All the above articles furnished in large or small quantities, at low rates, and packed so as to go any distance with safety.

Priced Catalogues of Dahlias, &c. &c., ready 1st of March.
March 1, 1852.

Albany Tile Works,

No. 60 Lancaster St., West of Medical College.

THE subscriber has now on hand, and is prepared to furnish to Agriculturists, Horse-Shoe and Sole Tile, for land drainage, of the most approved patterns. They are over 1 foot in length, 2¾ to 4½ inches calibre, from $12 to $18 per 1000 pieces—being the cheapest and most durable article used. Orders from a distance will receive prompt attention. [4-6t] JOHN GOTT, JR.

MOORE'S RURAL NEW-YORKER:

A WEEKLY HOME NEWSPAPER,

Designed for both Country and Town Residents.

THIS Journal, now in the third year of its existence, has attained an extensive circulation and acquired a high reputation. It embraces more Agricultural, Horticultural, Mechanical, Scientific, Educational, Literary and News matter, interspersed with numerous Engravings, than any other paper in the Union—and has no superior as an AGRICULTURAL AND FAMILY NEWSPAPER. Its various departments are under the supervision of an efficient corps of Editors, who are determined to render the contents of the whole paper USEFUL, PURE, AND ENTERTAINING. They are assisted by a large corps of Contributors and Correspondents,—including several popular Authors and Editors,—capable of adding interest and value to the pages of any publication.

The NEW-YORKER is published in the BEST STYLE. Each number contains EIGHT DOUBLE QUARTO PAGES, (forty columns,) illustrated with from two to six Engravings. It is pronounced by its Patrons and the Press the MODEL PAPER of its class, in both *Contents* and *Appearance*—and we invite all who desire a FIRST CLASS JOURNAL, for the Home Circle, to give it an examination, and, if approved, support.

TERMS—IN ADVANCE:—*Two Dollars a year*—$1 *for six months. Three copies one year for* $5; *Six copies, and one to agent, for* $10; *Ten copies, and one to agent, for* $15; *Twenty copies for* $25. ☞ *Specimen numbers sent free.*

☞ Subscriptions respectfully solicited,—to commence with any number. Back numbers to 1st May or April, furnished if desired. A new half volume commences 1st July,—and hence now is a good time to subscribe. Money, properly enclosed, may be mailed at the risk of the Publisher. Address D. D. T. MOORE,
June 1, 1852. Rochester, N. Y.

THE NEW YORK REAPER.

MR. McCORMICK, in an advertisement recently published, says, "that while Seymour & Morgan are going on to manufacture more reapers, they have made no provision to pay the judgment against them for $17,306; and another suit for infringement in the manufacture of five hundred reapers since the commencement of the first is about to be brought against them—and that, *if they fail to pay the damages, the purchasers* are not only *liable*, but may at any time *and will be sued for the same.*"

In answer to this, we say, that Mr. McCormick has no judgment against us for $17,306, or for any other sum. He obtained a verdict against us for upwards of $17,[illegible], on account of the machines which we manufactured and sold in 1850; but proceedings were immediately taken on our part to present the case to the U. S. Supreme Court, before which tribunal we hope to obtain a new trial, and in that case feel very confident that we can now make a successful defence. If we should be disappointed in this, we expect to pay the verdict, unjust as we know it to be.

With regard to the machines we are now building, Mr McCormick very well knows that they contain not a single feature which is embraced in any unexpired patent of his, and that we have as much right to build and sell them without reference to him, as farmers have to plow their lands without asking his permission. It will be observed that he does not pretend, in his advertisement, that the MACHINES WE ARE NOW CONSTRUCTING are any infringement of his patents.

The 500 machines which we sold last year were no infringement of his rights, and if he should see fit to carry his threat of prosecuting us into execution, it will be for the purpose of frightening, and deterring farmers from purchasing machines of us this year, and not with the expectation of obtaining a verdict against us. His object is to drive us out of the business of making Reapers, that he may have the entire field to himself. This, if truth and justice are allowed to prevail, he can not do.

Those wishing the New York Reaper for the coming harvest, will do well to give us their orders early, as we have heretofore been unable to supply the demand.

SEYMOUR & MORGAN.
Brockport, May 18, 1852.

THE subscriber deals in, and sells on commission, all kinds of good patents. Worthless ones need not be offered.

A good Grass Mower wanted.

The best of reference given. ALLEN VANE.
No. 157 South Water Street, Chicago, Ill.
April 10, 1852.—5-3t.

New York Agricultural Warehouse,

189 & 191 *Water Street, New York.*

A. B. ALLEN & CO.

HORSE POWERS, Threshers, and Separators. The Endless Chain or Railway Powers of our own manufacture, both single and double geared, for one and two horses, which has never been equalled for lightness in running, strength, durability, and economy. They are universally approved wherever they have been tried.

2d. The Bogardus Power, for one to four-horses. These are compact and wholly of iron, and adapted to all kinds of work.

3d. Eddy's Circular Wrought-Iron large Cog Wheels, for one to six horses. A new and favorite power.

4th. Trimble's Iron-sweep Power, for one to four horses.

Threshers—Improved Threshers made upon the best principles, threshing clean with great rapidity.

Fan Mills for Wheat, Rye, Oats, &c., of the best construction.

Rice Fan Mills made expressly for the South.

Milk Pans—Glass and Enamelled Iron Milk Pans, very desirable articles.

Churns—Thermometer, Atmospheric, Kendall's, and other kinds.

Hand Cultivators and Hand Plows—are very useful implements in garden culture.

Scythes—Grass, Grain, Bush, and Lawn Scythes of the best kinds.

Rakes—A large assortment Steel, Iron, and Wooden-headed Garden Rakes, and Lawn and Hay Rakes.

Horse Hay Rakes of new and highly improved patterns.

Reaping and Mowing Machines—These have been fully tested, and embrace many late improvements, and we can highly recommend them.

Garden and Fire Engines, very useful machines, arranged on wheels, for watering gardens or walks, and affording protection from fire. They will throw a strong stream forty feet high, are easily worked, and not liable to get out of order. Also, small Garden Pumps and Syringes of various styles.

Hay and Cotton Presses—Bullock's Progressive Power Presses, combining improvements which make them by far the best in use.

Water Rams, Suction, Force, and Endless-Chain Pumps; Leather, Gutta-Percha, India-Rubber Hose, Lead Pipe, &c.

Cabbage Plow—Very light and convenient for working among cabbages.

Potato Plow, with double mould and other forms for hilling and weeding.

Our implements occupy three large stores, and we believe they make up the largest and most complete assortment in America. In addition, we have a machine shop, employing upwards of one hundred men, where any articles in our line can be made to order.

A. B. ALLEN & CO.,
June, 1851.—6-tf. 189 and 191 Water St., New York.

Fruit Farm in Ohio for Sale.

"POMONA FARM"—120 acres of excellent land; 50 acres young orchard, containing 8000 peach and 2000 apple trees of the choicest market varieties, commencing to bear, and partly enclosed with Osage Orange hedge. About 40 acres is woods pasture with living water. The soil is strong loam, well adapted for grain and grass, as well as fruit—was especially designed for fruit, stock, and poultry—about 100 improved fowls are on the premises. The buildings are of little value. The situation is very healthy and pleasant; good water; schools and other social advantages convenient.

The farm is situated at the thriving village of West Jefferson, 14 miles west of Columbus, at the intersection of the "National Road," the "Xenia Turnpike," and the "Cleveland, Columbus, & Cincinnati Railroad"—only 100 rods from the village and depot—thus affording excellent facilities for travel and transportation, with certain markets for products. It will be sold at a bargain.

Address M. B. BATEHAM,
Editor Ohio Cultivator, Columbus, O.
June 1, 1852.—6-2t*

GERVASE WHEELER, Architect,

NORWICHTOWN, CONNECTICUT,

RESPECTFULLY solicits professional engagements from those desirous of building. Designs for residences, churches, school-houses, arrangement of grounds and out-buildings, and for internal decoration, prepared and forwarded by express. Terms moderate—two dollars charged for such information as can be given in a letter.

GREAT SALE OF BLOOD CATTLE.

ON Wednesday, the 18th of August next, I will sell the chief part of my large herd of Blood Cattle—chiefly cows, heifers, and heifer and bull calves—comprising upwards of fifty full-bred Short-Horns.

Also, eight thorough-bred Herefords—a two years old bull, a yearling bull, three cows, and three calves. One of the Hereford cows ("Rarity") was imported from England by Messrs. Corning & Sotham, in 1841. The others, excepting the two years old bull, are her descendents, by bulls of the same stock.

Also, two or three Devon bull calves, got by Mr. Ambrose Stevens' imported bull "Candy," bred by the distinguished Mr. Quarity, of Devonshire, England, and out of cows descended from the herd of the late Earl of Leicester.

The remainder of the cows and calves, forty to fifty in number, are high-bred Short-Horn grades, with a dash of Devon blood in some of them.

The calves of the thorough-bred Short-Horns and grade cows, are mostly got by the imported Short-Horn bull "Duke of Exeter," (10,152,) of the celebrated "Princess tribe," bred by Mr. John Stephenson, of Durham, England, whose herd is excelled by none, if equalled, by any now in England.

All the Short-Horn and grade cows and heifers which come in season, will be bulled, previous to the sale, by "Duke of Exeter."

Many of the cows, both thorough-bred and grade, are descended from the Bates bulls "Duke of Wellington," imported by George Vail, Esq., of Troy, N. Y.; and by "Symmetry," son of "Wellington," out of Mr. Vail's imported Bates cow "Duchess."

This stock has been bred with a strict regard to their milking quality, in which they have been fully *proved*, and are not excelled by any herd of cows in the United States. They are all gentle, with fine silky udders, milk easy, and are animals that will be satisfactory to any one in want of the best breeding and milking stock.

The sale will take place at the residence of Peter Gurbrane, two miles above Albany, on the Troy road, on the homestead farm of Gen. Van Rensselaer, where the cattle will be for a week before the sale.

Catalogues with pedigrees will be prepared by the 15th of June, and sent by mail to all post-paid applicants.

I will also sell at the same time, two pairs of six years old thorough-bred Short-Horn oxen, and two or three pairs of matched steers.

Also, ten or twelve South-Down buck lambs, got by an imported ram, from the unrivalled flock of Jonas Webb, of Babraham, England, and from Ewes descended from the flocks of Mr. Webb, and Mr. Ellman of Sussex.

LEWIS F. ALLEN.
Black Rock, N. Y., May, 1852.—6-3t*

The Celebrated Horse "Morgan Eagle."

THIS truly celebrated horse will stand for Mares this season, commencing April 19th, at the Franklin House in Geneseo, on Monday, Tuesday, Wednesday, and Thursday, and at Scoville's Eagle Hotel in Mt. Morris, on Friday and Saturday of each week during the season.

"Morgan Eagle" was purchased in the fall of 1847, in Tunbridge, Vt., by J. Henderson, at a high price, for the express purpose of improving the stock of horses in this county. He is about 16 hands high, and well proportioned, is a bright bay, and for symmetry and action, cannot be surpassed. Morgan Eagle, and the celebrated trotting mare, Lady Sutton, of New York, were sired by Old Morgan Eagle, of Vermont.

Breeders of horses are particularly requested to call and examine him.

Pasture will be furnished for mares sent from a distance and good attention paid to them. Escapes at the risk of the owners. Those who part with mares before foaling, will be held responsible for the insurance. Mares must be returned every two weeks or they will be held for the insurance. J. HENDERSON & Z. H. AUSTIN,
Geneseo, April 16, 1852.

Improved Subsoil Plows.

THE subscribers offer for sale an Improved Subsoil Plow, made under the advisement of Prof. J. J. Mapes, and free from the objections urged against those formerly in use. The wearing parts are so arranged that they may be easily and cheaply renewed, while the amount of force requisite to move them is less than half that required by those previously made.

Price—One Horse Plow, $5; with draft rod, $6. No. 1, with draft rods, $8.50. No. 2, do., $11.

LONGETT & GRIFFING,
June, 1852.—6-3t. No. 25 Cliff street, New York.

DURHAM CATTLE.

I HAVE imported several cows and heifers of the celebrated Princess Tribe of Short-Horn Durham Cattle, bred by and from the herd of John Stephenson, England. This tribe is unequalled in England or America, for style, quality, and milk.

In connection with Col. Sherwood, I imported the prize bull Third Duke of Cambridge, (5,941,) bred by the distinguished breeder, Thomas Bates, of England, and got by his famous prize bull, Duke of Northumberland (1,940.) We also imported from Mr. Stephenson, the Princess prize bull, Earl of Seaham, (10,181.) I have also imported Princess I, Princess II, Princess III, Princess IV, Princess V, and the bulls Wolviston and Earl Vane, all of the Princess Tribe, and bred by Mr. Stephenson. I also imported the cow Waterloo V, bred by Mr. Bates, got by his prize bull Duke of Northumberland, and of the same family as Third Duke of Cambridge. I also purchased of Mr. Ramsay, the cow Wildeyes V, bred by Mr. Bates, and bought by Mr. Ramsay at the sale of Mr. Bates' cattle, in England, in 1850.

I am now breeding these imported cows and heifers, to the imported prize bulls Third Duke of Cambridge, Earl of Seaham, and Vane Tempest; also, to Wolviston and Earl Vane. I can supply breeders with bull calves out of these cows and heifers, got by these imported bulls, of a *red* or roan color, as may be preferred.

The Third Duke of Cambridge won the first prize for Durham bulls at the Show of the New York State Agricultural Society, at Syracuse, in 1849, beating among others, three bulls of Mr. George Vail's (of Troy) breeding, including Buena Vista. He also won the first prize for Durham bulls at the show of the same Society at Albany, in 1850, beating among others, Mr. George Vail's bull Meteor.—(Meteor by Mr. Vail's imported Bates bull Wellington—dam, Mr. Vail's imported cow Duchess.)

Earl of Seaham won the first prize for two-year-old Durham bulls at the Show of the same Society at Albany, in 1850, beating Mr. George Vail's bulls Fortune and Eclipse. Seaham won the first prize for Durham bulls of all ages two years and over, at the Show of the American Institute in New York, in 1850. Seaham also won the first prize for Durham bulls at the Show of the New York State Agricultural Society at Rochester, in 1851, beating Mr. Lewis G. Morris' prize bull Lamartine, and many others.

Princess II won the first prize for yearling Durham heifers at the Show of the New York State Agricultural Society at Syracuse, in 1849, beating Mr. Chapman's Fashion from Mr. Vail's herd. Princess II also won the first prize for two-year-olds at the Show of the same Society at Albany, in 1850, beating, among others, Mr. George Vail's two heifers, Hilpa 2d (got by Mr. Vail's imported Wellington, out of his imported cow Hilpa,) and Eunice 4th.

Princess I is the dam of Col. Sherwood's prize bull Vane Tempest. At the Show of the New York State Agricultural Society at Albany, in 1850, as a bull calf, and at the Show of the same Society at Rochester in 1851, as a yearling bull, Vane Tempest won the first prizes, beating, in both instances, Mr. Vail's bull Kirkleavington (got by Mr. Vail's imported Wellington, out of imported Lady Barrington.) Of these imported cows and heifers, Princess II has alone been shown. Wolviston and Earl Vane have not been exhibited.

Third Duke of Cambridge is the only bull now in America bred by the celebrated Thomas Bates of Kirkleavington, England, and is the best bull ever brought to America from Mr. Bates' herd.

Wolviston is brother to Earl of Dublin, bred by Mr. Stephenson, that is now let at a high price, to that celebrated breeder, Sir Charles Knightley, Leicestershire, England. Earl Vane, now a yearling, is brother to Vane Tempest.

Breeders desiring the blood of Mr. Bates' herd, can nowhere else in America, than from Third Duke of Cambridge, "procure it with such high characteristics of style, quality, symmetry, and substance."

Breeders buying bulls of the Princess Tribe, will get those which are superior to all other Short-Horn Durham Cattle. All Mr. Bates' great leading prize animals, winning at the great English Shows, viz: Duke of Northumberland, Duchess 34th, Duchess 42d, Duchess 43d, Cambridge Rose, &c., were got by Mr. Stephenson's Princess Tribe bull, Belvedere, (1,706,) and he never got beaten when he showed the get of Belvedere.

As feeding beasts, no Tribe ever surpassed the Princess. Earl of Seaham in six months, March to September 1851, made over 600 pounds growth.

The Princess Tribe of Short-Horns is concededly the best milking tribe of Durham cattle in England; all the cows of the tribe milk capitally. Of the four which have dropped calves for me, all are very fine milkers. Princess I, at four years old, has given twenty-six quarts a day, very rich milk. And Princess IV, with her first calf, has given twenty-two quarts a day. Col. Sherwood's Red Rose of this tribe, four years old, getting grass only, made in thirty successive days of May and June 1851, sixty pounds and four ounces of butter; and forty-seven pounds and eleven ounces in thirty successive days in August 1851, which was a period of great drouth.

6-1t-a AMBROSE STEVENS, New York c'y.

LEWIS G. MORRIS'

THIRD ANNUAL SALE, BY AUCTION,

OF

IMPROVED BREEDS OF DOMESTIC ANIMALS,

Will take place at Mount Fordham, Westchester Co., (11 miles from City Hall, New York,) on WEDNESDAY, JUNE 9, 1852. James M. Miller, Auctioneer.

APPLICATION need not be made at private sale, as I decline in all cases, so as to make it an object for persons at a distance to attend. Sale positive to the highest bidder, without reserve.

Numbering about fifty head of Horned Stock, including a variety of ages and sex, consisting of Pure Bred Short Horns, Devons, and Ayrshires; Southdown Buck Lambs, and a very few Ewes; Suffolk and Essex Swine. Catalogues, with full pedigrees, &c., &c., will be ready for delivery on the first of May—to be obtained from the subscriber, or at the offices of any of the principal Agricultural Journals or Stores in the Union. This sale will offer the best opportunity to obtain very fine animals I ever have given, as I shall reduce my herd lower than ever before, contemplating a trip to Europe, to be absent a year, and shall not have another sale until 1854.

It will be seen by reference to the proceedings of our State Agricultural Society, that I was the most successful exhibitor of Domestic Animals, at the late State Fair.

I will also offer a new feature to American breeders—one which works well in Europe; that is, *letting* the *services of male animals;* and will solicit propositions from such as see fit to try it. Conditions—The animal hired, to be at the risk of the owner, unless by some positive neglect or carelessness of the hirer; the expense of transportation too and from, to be borne jointly; the term of letting, to be one year or less, as parties agree; price to be adjusted by parties—to be paid in advance when the bull is taken away; circumstances would vary the price; animal to be kept in accordance with instructions of owner before taking him away.

I offer on the foregoing conditions, three celebrated prize bulls, "Major," a Devon, nine years old; "Lamartine," a Short Horn, four years old; "Lord Eryholme," Short Horn, three years old. Pedigrees will be given in Catalogues.

At the time of my sale, (and I would not part with them before,) I shall have secured two or three yearly sets of their progeny; and as I shall send out in August next a new importation of male animals. I shall not want the services of either of these next year. I would not sell them, as I wish to keep control of their propagating qualities hereafter.

I also have one imported buck, the prize winner at Rochester last fall, imported direct from the celebrated Jonas Webb; and also five yearling bucks, winners also, bred by me, from bucks and ewes imported direct from the above celebrated breeder. They will be let on the same conditions as the bulls, excepting that I will keep them until the party hiring wishes them, and they must be returned to me on or about Christmas Day. By this plan, the party hiring gets rid of the risk and trouble of keeping a buck the year round. All communications by mail must be prepaid, and I will prepay the answers. L. G. MORRIS.

Mount Fordham, April, 1852.—5-2t.

Field Seeds.

AUSTRALIAN WHEAT—very superior. The berry of this grain is extra large, and makes the best of flour. It produces a greater average crop than any other variety now grown in New York. Several years' experience in its cultivation, proves that it is less liable to rust or mildew than other kinds; and as the stalk is large and strong, it is also less liable to blow down or lodge. Price, $4 per bushel. Other varieties of wheat, such as the White Flint, Mediterranean, Black Sea, &c.

Buckwheat, of the best kinds in market.

Ruta Baga, or Swedish Turnep Seed. The Purple Top and other superior varieties.

Turnep Seed—Large White Flat, Long White, Red Top Flat, Yellow Aberdeen, Yellow Stone, and other improved kinds for the field or garden. A. B. ALLEN & CO.,

June, 1852.—6-tf. 189 & 191 Water st., New York.

EMERY & COMPANY'S

RETAIL PRICE LIST of Horse Powers, Threshers, Separators, Saw Mills, Feed Mills, Fanning Mills, &c., &c., manufactured by themselves, and delivered on board any conveyances at Albany, N. Y., or at any place in the United States, by the addition of freight:

Emery's Patent Changable Power, Thresher, Separator, and Bands complete, for 2 Horses,..................	$150
“ “ “ 1 Horse,....................	120
Emery's Improved Wide Rack & Pinion, with Thresher, Separator, and Bands, for 2 Horses,.............	120
“ “ “ “ 1 Horse,..............	95
Common or Wheeler Rack & Pinion Power, Thresher, Separator, and Bands, for 2 Horses,.................	135
“ “ “ 1 Horse, ...	110

If sold separately, the following prices are charged:

Emery's Changeable R. R. Horse Power, for 2 Horses,.	110
“ “ “ “ 1 Horse, .	80
Emery's Wide Rack and Pinion Power, for 2 Horses,.	90
“ “ “ “ 1 Horse, .	60
Common or Wheeler Rack & Pinion Power, 2 Horses,.	95
“ “ “ “ 1 Horse, .	75
Thresher with cylinder 26 inches long, 14½ in diameter, together with Separator and Fixtures,..............	35
Fanning Mills with pulleys for Band,.........$26, 28,	30
Portable Circular Saw Mill, 24 inch saw filed and sett, for sawing railroad wood, slitting fencing, &c.,......	35
Upright or Felloe Saw for Wheelrights,..............	40
Churning attachment for driving one or two churns at a time of barrel size, except churns,................	12
Sett Bands. Wrenches, Oil Can, and Extras,..........	5
Cross Cut Saw arrangements for butting and cutting off logs, including saw, guides and connections for use,	12
Feed Mill, cast iron plates,...........................	35
French Burr Stone Mill for Grinding, 18 inch diameter,	100
“ “ “ “ 20 “	125
Power Corn Sheller, for 1 or 2 Horses,...........	35 to 50

Terms—Cash, or approved notes or acceptancies with interest, payable within four months in Albany, New York, Boston, Philadelphia, or Baltimore, as may best suit the purchaser.

All articles warranted made of good materials, and to operate as represented, or may be returned within three months at the expense of manufacturers for home transportation, and purchase money refunded—the purchaser being his own judge in each case. For further particulars, see previous advertisements, or address the subscribers. Liberal deduction to dealers. Local Agents wanted to sell and put the above in operation. EMERY & CO.,

June, 1852. 369 & 371 Broadway, Albany, N. Y.

Emery & Co.'s Patent Horse Powers and Threshers.

THE undersigned have been appointed sole agents for the sale of this valuable Power and Thresher in the city of New York, where a large assortment may be found at the manufacturers prices. LONGETT & GRIFFING,

6-1t State Ag. Warehouse, 25 Cliff st., New York.

Pure Java Fowls.

THE subscriber offers for sale a few pure Java Fowls, from imported stock direct from Java. These fowls are very rare, and in good qualities are not excelled by any variety in the United States. $5 for first quality; $3 for 2d do.

Address J. W. PLATT,

June, 1852.—6-1t* Rhinebeck, N. Y.

Emery's Patent Latest Improved PREMIUM R. R. HORSE POWERS, &c.

ROCHESTER AGENCY.

THE Subscriber, late from the Agricultural Works, Warehouse, and Seed Store of Messrs. Emery & Co., Albany, (where he has been engaged for the past six years,) has been induced to establish an Agency for the sale of their justly celebrated Premium Horse Powers, Threshers, Separators, &c., in Rochester. Particular attention will be paid to selling and putting up the Horse Powers, and other fixtures for threshing, &c. A thorough knowledge of these machines enables him to put them up more satisfactorily than has been done heretofore. Price and terms same as at Albany, transportation added.

He will also keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, ready for use, adapted to the Power; Plows; Cultivators; Hay Cutters; and all other agricultural implements.

All interested are invited to call and examine the machines and implements at the store of Briggs & Bro., No. 68 State Street. Rochester, N. Y.—where the undersigned will be found ready and qualified to explain the merits and practical operation of all articles in his line of trade.

May, 1852. E. D. HALLOCK.

TRIAL OF IMPLEMENTS

By the New York State Agricultural Society,

JULY 1852, AT THE VILLAGE OF GENEVA.

THE trial of Grain Reapers, Mowing Machines, Steam Engines for farm purposes, Grain Drills, Horse Powers, Flax and Hemp Dressing Machines, Threshers, Seed Planters, Cultivators, and Broadcast Sowers, will take place at Geneva, between the 12th and 26th of July next. (The particular day of the commencement of the trial will be given hereafter.) The competition will be open to all who become members of the Society, and enter their machines for trial.

Upwards of $400 will be awarded to the successful candidates; and Inventors are invited to be present with their machines, and engage in this trial, which will be conducted in a manner to secure practical and reliable results, that will be of importance to the whole agricultural interest of the country.

Persons desiring to compete must become members of the Society by the payment of $1, and enter their names with the Secretary by the 5th of July, and their implements.

All desired information as to the regulations for the trial will be furnished on application to the Secretary.

B. P. JOHNSON, Secretary.

Agricultural Rooms, Albany, May, 1852.

Peas! Peas!!

WE are now receiving by the first boat from Canada—

1,000	bushels	pure White Field Peas, such as Golden Vine, Creeper, White Canada, etc.
500	bushels	White Marrowfat.
100	“	Black Eyed do.
100	“	Blue Prussian.
200	“	Early Washington.
100	“	Early Frame.
100	“	Early Warwick.

Farmers who want good Peas at low prices, will please call at the Genesee Seed Store and Agricultural Warehouse, 63 and 65 Buffalo st. J. RAPALJE & CO.

April, 1852.

Prices of Agricultural Products at the Principal Markets in the United States. — May 20, 1852.

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Philadelphia.	
Beef, per 100 lbs....	$6.00	a 7.50	$6.00	a 7.50	$5.50	a 6.00	$4.00	a 4.25			$4.25	a 5.25
do mess, per bbl..	9.75	12.75	12.00	15.00	10.00	10.50					16.00	16.50
Pork, per 100 lbs....					7.00	7.50	4.00	4.12½				
do mess, per bbl.		18.50	19.00	20.00	16.00	19.00	16.50	17.00	$16.37	a 16.50	19.00	20.00
Lard, per lb........	9	10	10	11½	9	10	9	9½	8	10½	10½	11½
Butter, do	15	21	17	25	16	18	8	10	14	13	14	16
Cheese, do	6½	8	6	9	7	8	5	7	6½	7½		
Flour, per bbl......	4.00	5.75	4.75	5.75	4.62	4.75		4.00		3.22	4.25	5.25
Wheat, per bush....	90	1.11	90	1.05	96	1.00	70	76	60	62	95	1.03
Corn, shelled, per bu.	63	66	61	66	50	54	33	34	27	29	61	64
Rye, do		78	72	78	69	70				50		75
Oats, do	33	43½	40	46	38	40	18	21		25	43	45
Barley, do	64	66		75	67	70			40	50		
Clover seed, do	7½ pr. lb.		9 a 11 per lb.			5.50	12½ per lb.		4.00	4.25		4.12½
Timothy seed, do	16.13 per tce.				2.25	3.00		2.25	1.50	2.50	2.75	3.00
Flax seed, do	1.20	1.30	1.20	1.35	1.25	1.50		1.00		1.00	1.25	1.30
Hay, per ton........	13.00	14.00	13.50	14.50	12.00	15.00			8.00	15 00		
Wool, per lb........	30	43	31	46	30	40	30	40	26	30		
Wood, hard, per cord					4.00	4.50	3.25	5.00				

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ADVERTISEMENTS, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance.*

Improved Stock.

CATTLE of the Durham, Devon, Hereford, Alderney, and Ayrshire breeds.

SHEEP of the Native and French Merino, Saxony, South Down, and Cotswold.

PIGS of the Lincoln, Suffolk, and Berkshire breeds.

From our long experience as breeders and dealers in the above kinds of stock, and our excellent situation for purchasing and shipping, we think we can do as good justice to orders, as any other house in the United States.

A. B. ALLEN & CO.,
April 1, 1852—tf. 189 and 191 Water st., New York.

Clover and Timothy Seed.

NOW on hand and for sale at the Genesee Seed Store and Agricultural Warehouse, 63 and 65 Buffalo St.
500 bushels good Timothy Seed.
200 " prime Clover.
Rochester, April, 1852. J. RAPALJE & CO.

Potatoes for Seed.

1000 bushels *White Mercer Potatoes*, an excellent potato, yielding first rate and never rotting. It is the favorite here. Price, $4 per barrel.

Also, 100 bushels of the *Mexican Potato*—the very best potato in existence for the table, so pronounced by all who have tested them.

Those who wish either of these kinds must apply soon, as they are going off with a rush.
Rochester, N. Y., May, 1852. J. RAPALJE & CO.

Young Morgan Tiger

WILL stand the ensuing season at the stable of Asa Miller, two miles southwest from Lodi, Seneca Co. Terms of insurance, $10.

This *justly celebrated Horse* has been owned and kept by J. M. Gillet, of Wayne Co., three seasons—took *First Premium* at Wayne County Fair in 1850, and certificate of *Best Horse* exhibited 1851. His colts, one and two years old, took First Premiums at the State Fair in 1851. Pasture at reasonable charge. MILLER & SWARTHOUT.
Lodi, May, 1852.—6-1t*

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, JR., EDITORS.
P. BARRY, Conductor of Horticultural Department.

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DANIEL LEE,
December, 1851. *Rochester, N. Y.*

POSTAGE ON THE GENESEE FARMER.—50 miles or under, five cents per year; exceeding 50 miles and not over 300, ten cents; exceeding 300 and not over 1000, fifteen cents; exceeding 1000 and not over 2000, twenty cents; exceeding 2000 and not over 4000, twenty-five cents; for any distance exceeding 4000, thirty cents.

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.

THE GENESEE FARMER

VOL. XIII. ROCHESTER, N. Y., JULY, 1852. No. VII.

SUGGESTIONS ADDRESSED TO STATE AND COUNTY AGRICULTURAL SOCIETIES.

NEXT in importance to the organization of efficient State and County Agricultural Societies, is their union on just and liberal terms, in a way that will bring the strength of the whole to bear on the advancement of agriculture in a concentrated form. Hitherto the friends of improvement have so divided and sub-divided their moral force, and diluted what little enthusiasm exists in behalf of agricultural education, that both have signally failed to realize the wishes and hopes of those that believe in human progress. Other means, and more extended combinations must be brought into requisition, before the twenty-five millions of souls in this great Republic can be made to appreciate the dignity and importance of scientific agriculture. It is folly to expect a steam engine of ten-horse power to do the work that can only be performed by one of ten times that force. Local Societies for the promotion of agriculture are confessedly valuable; but let them unite their present comparatively inefficient efforts, and vast results may speedily be achieved now wholly unattainable. It was the federal union of the thirteen isolated colonies that created eighteen new State sovereignties and five Territories under the American flag. It would be easy to name thirteen State Agricultural Societies that now suffer from the weakness of colonial isolation and dependence, which, if united, would help each other, and thereby command all the assistance from popular sympathy and legislation that agriculture deserves.

Will State and County Societies combine to strengthen themselves, under any name or form? This is just now the grand question in the current history of rural affairs in this country. In some States and Counties, and we trust in a majority, public intelligence is sufficiently advanced for a general and cordial co-operative movement. By and between all such Societies let there be no more repulsion, but a speedy and hopeful union to promote a common cause. In prosecuting the most destructive wars, the science of combinations has been carried to great lengths; and in modern times, victory has rarely failed to perch on the banner of the army whose combinations were the most perfect. Can no science, nor patriotism, nor the love of honorable distinction, bring out into the field of improved husbandry the millions of farmers in the United States? A short war usually costs many millions of dollars and many valuable lives, and military glory has ever been the most popular in the world. To the friends of peace this lesson teaches the wonderful power of combinations, and suggests the propriety of having banners and music at cattle shows and fairs, to render them more attractive to those who are governed mainly by the outward senses. Take mankind precisely as they are, and then convert them into subscribers to agricultural journals, into members of rural associations for mutual instruction and improvement, and into earnest co-laborers in the support of National and State Agricultural Societies. These institutions can be made extremely useful; but they need watching—need popular sympathy—need generous support.

Congress publishes 130,000 volumes a year of agricultural books for general distribution. By placing this branch of business under the direction of the executive officers of a National Society, acting as the federal head of State and County Societies, an annual report on the agriculture of the United States might be gotten up far more useful and creditable than that now published, and for less money; and the books might go directly into the hands of State and County Societies, for distribution where they will do most good. In this way the General Government would aid in sustaining, and in the creation of new local Societies, over the whole Union, devoted to the improvement of tillage and husbandry. Suppose there were in our thirty-one States and five Territories, one thousand Societies, and that a National Board should distribute only 100,000 volumes a year. Let these books be of the most reliable authority in rural arts and sciences, and properly adapted to the various soils, climates, and circumstances of American farmers, and the one hundred new volumes which each Society received every year would render both the Society and the community where it labored, an invaluable service. This arrangement would give members of Congress 30,000 volumes for personal distribution; and if properly made, they would be worth more than the whole 130,000 now are. We think that it needs no argument to satisfy most readers, that politicians are not the best men to control the production of books relating to agriculture. The work in all its details should be in the hands, not of government, but of a National Board or Society, appointed by State Boards or Societies. We insist on the point that, something should be done to give the latter a little more means for doing good, and greater dignity and consequence in a nation of farmers. State and County Societies have the power to induce Congress, which now expends over fifty millions of dollars a year, drawn mostly from the soil, to do something for State associations. The officers and members of these Societies have only to unite their influence to carry any reasonable measure. Isolation has ever been the bane of agricultural progress. Nothing can be gained without concert of action, harmony, and perseverance.

What may be the result of the National Agricultural Convention to assemble in Washington on the 24th of June instant, (we write on the 5th,) we know not; but from the high character of the gentlemen who make the call, we anticipate a favorable issue. Everything, however, depends on the friends of improvement in the several States. If they desire to increase their intercourse with each other, and with the leading friends of agriculture in Europe, they will associate for such and other kindred purposes under a national organization. So great are the facilities for international exchanges of rural knowledge, of seeds, fruits, cuttings, and domestic animals, that the best in the world will come to the door of every farmer, if he will only make a little personal and associated effort in that behalf. Three millions of cultivators and freemen, *united*, may do anything and everything that ought to be done. Sustain, then, all existing agricultural Societies, and found new ones wherever needed.

◆

SALT YOUR HAY.—It is a first rate practice to scatter a little salt on every layer of hay or clover when you are stacking it. Those who have never done so can scarcely imagine the avidity with which horses and cattle eat the salted in preference to the unsalted hay. Especially would we recommend the practice in bad seasons, and in stacking damaged, or low, wet, meadow hay. It retards fermentation, and imparts such a relish that cattle sometimes prefer it to good, well cured hay. We have often used it at the rate of four quarts to the ton, and have derived much benefit from so doing. Try it.

THE PHILOSOPHY OF NUTRITION.

PLANTS derive all the elements that enter into their composition either from the soil or the atmosphere,—they take them up in solution in an elementary or simple form, and convert them into compound substances; and it is these compound substances that form the food of animals—the simple elements of them, though given in exactly the same proportion as found in plants, would not only be non-nutritious, but *poisonous*. Nothing but what possesses organization can sustain animal life.

The organic or nutritious matter of all plants consists of oxygen, hydrogen, nitrogen, and carbon; these four elements compose about 95 per cent. of all animals and plants. The most nutritious food and the most virulent poison are alike composed of these elements, varying only in proportions.

Chemists divide the compounds of plants and animals into two great classes—the *nitrogenous*, or substances containing nitrogen combined with the other three elements; and the *non-nitrogenous*, or substances composed only of oxygen, hydrogen, and carbon.

Everything possessing life or organization, contains *nitrogen*. The flesh, brains, muscles, tissues, &c., of the animal organism, are all nitrogenous; while the fat is non-nitrogenous. The gluten of wheat is nitrogenous, and *identical in composition* with the pure flesh of the animal. Starch is non-nitrogenous, and corresponds with fat. There is in all plants a nitrogenous compound almost identical in composition with the gluten of wheat, the albumen of an egg, the casein of cheese, &c., the composition of which, as we have said, is precisely similar to that of the fibrine, &c., of the animal. Now, these nitrogenous substances are the real sources of nutrition; they are similar in composition to the white and yolk of an egg, which we have only to expose to a certain temperature for three weeks, when, under the influence of its principle of vitality, we obtain bones, sinews, muscles, claws, beak, eyes, feathers, nerves, lungs, liver, intestines, and the various other parts of the animal economy. All these products come from these apparently simple substances merely by the action of the principle of vitality. In like manner, when these vegetable or animal substances get into the animal system, and are operated upon by the vital functions, they are dissolved and distributed through the various parts, to form the different bodily organs required by the necessity of the animal; and it is impossible to imagine that these materials agreeing in their composition with the flesh, &c., of the animal, can be changed at all in composition when taken into the system—that they can, when there, receive any addition either of carbon or nitrogen. We have no doubt whatever, that vegetables produce the flesh of animals, and that the animals dissolve the already prepared matters, and under the action of vitality give them a different mechanical form, and put them on the muscles of the body. There is no reason to believe that the stomach of the animal acts upon these matters in any other way than by solution, the vital force afterwards putting each particle in its proper place in the system.

The non-nitrogenous elements, or the starch, fat, oil, gum, sugar, &c., are also necessary as food for animals—not to build up or repair the different parts of the organism, but to keep up animal heat, and to enable the animal to lay on fat. They are often very properly termed the respiratory or fat-forming principles, and many persons have supposed that the relative value of certain foods for fatting purposes was in direct proportion to the amount of these heat-producing, fat-forming substances. This, however, is not correct; or at least is not borne out by any of the numerous experiments that have been made in reference to this point. The fact is, that the non-nitrogenous substances are much more plentiful in all our cultivated grains and grasses, than the nitrogenous: and it would appear that however liberally an animal may be supplied with non-nitrogenous substances, yet if there is not a corresponding supply of nitrogenous matter, little fat will be produced; so that it may be laid down as a rule, other things being equal, that the more nitrogen a food contains, the greater is its value as food for animals. If an animal were fed on non-nitrogenous substances alone—upon fat, oil, starch, gum, or sugar—it would be perfectly impossible for it to grow, to work, or to live. Arrow-root, starch, and all other things of that kind, by themselves, are insufficient to sustain life,—they may do very well to produce animal heat, but it would be perfectly impossible to live on them alone; they must be united with other material containing nitrogen, which alone can supply the daily waste of the muscles. Every motion which an animal makes with any muscle, causes a proportionate destruction of that muscle. At the time he makes the motion, the oxygen attacks the muscle and dissolves a portion of it equivalent to the amount of motion and force produced. This is a method of obtaining animal heat which is independent of the non-nitrogenous matters supplied in the food, the carbon and hydrogen of the muscles being used for this purpose, while the nitrogen is separated from the blood by the kidneys, and thrown out of the system in a liquid form.

From these facts it is evident that both rest and warmth are necessary for an animal's increase and proper development. In fatting an animal for the butcher, we of course do not wish a constant and rapid transformation of the muscles of the body, which is the case if the animal takes much exercise. Neither do we wish the fat-forming principles of the food used, to produce unnecessary heat; for as it must necessarily consume a certain amount of the elements of respiration in order to produce heat, and as fat can only be laid on in proportion to what remains after this necessary production of animal heat, it is quite clear that fatting animals should always be so sheltered as to be enabled to use the elements of respiration which are found in their food, so as to produce the best possible effect: and as every motion of the animal produces a corresponding destruction of the muscles, it is quite clear that the more animals move about, the more of the elements of nutrition will they require to supply what has been wasted. Therefore, in fatting animals, they should be allowed no more exercise than is absolutely necessary for health, and be kept comfortably warm. It is known that animals often asleep gain more flesh than others which are more wakeful; and that if they are kept in a dark place, they are more disposed to be drowsy, and consequently to lay on fat, than if exposed to the light. We must not, however, treat rearing animals in the same way as the fatting ones. We want the former to have a good constitution, and to increase their muscles and general size; and this can only be secured by giving them a considerable amount of exercise in the open air, and giving them as much food of a nutritious kind as they can eat.

The effect of common salt on fatting animals is not generally understood. Salt is composed of chlorine and sodium. The bile of an animal is a sort of carbonaceous, resinous compound, held in solution by soda. The effect of salt is to enable the animal to form bile; without it in the food, no bile could be formed, and bile is necessary to the healthy action of the animal functions. But mark—any means which produces an excess of bile, is merely robbing an animal of a portion of its food, and preventing the formation of a quantity of fat; because the bile is formed of fat, oil, gum, sugar, &c., and really represents and embodies the carbonaceous materials destined for immediate consumption. The more bile we produce, the less fat we produce; and the more salt we give animals, the more bile we allow them to produce. A cow eats about four ounces of salt in her food per day, which is contained in the saline ingredients of the food itself, and would appear to be sufficient for bile-forming purposes. For growing stock, salt may often be an advantage, benefitting their health and increasing their appetite; but we doubt the economy of giving salt to fatting stock.

On the subject of cooking food for animals there is much diversity of opinion, some condemning it altogether, while others have exaggerated ideas of its value. If nutritive and useful materials exist in certain kinds of food, cooking can only be useful by aiding their solubility. It can make them more soluble, and on that account probably a less amount of food will pass through the system undigested. No one supposes that if we were to cook sawdust for any length of time, we should make it good food; those parts of the substance which are indissoluble, and which consist of woody matter, would still remain so; but the other parts, such as starch, gum, oil, &c., would be made soluble in water, and consequently could be more easily assimilated by the animal. But it is important that these things be not carried too far. We know very well that the functions of digestion are very important, nor are they so simple as some imagine. There are more processes than one going on, and there are a great many things to be considered. If the requisite amount of saliva be not swallowed, it may cause a great defect in an important element of health; and if animals swallow their food too quickly, they will probably not have sufficient saliva for digestion. We need more light on this, as on almost every other agricultural subject.

CUTTING FOOD FOR STOCK.

It is generally admitted to be good economy to cut hay for cattle, if it is of an inferior quality, much less being wasted by the animal; and it affords an excellent opportunity of mixing meal or shorts with it, by way of seasoning, making it more palatable as well as more nutritious. But many farmers have their doubts whether it pays to cut good hay—whether much benefit is derived from the operation in the way of rendering it more easy of digestion, &c. With a view to settle the question, the Worcester Agricultural Society offered two premiums, of $30 and $20, for the best experiments on the subject, laying down the rules according to which the experiments should be conducted, which were briefly as follows:

> "The trial to be made with at least two animals, as near alike in condition, age, &c., as possible. the time of trial to last at least eight weeks, divided into periods of two weeks each. One animal to be fed with cut while the other is fed with uncut hay; the feed of each to be reversed at the expiration of two weeks, and so on alternately each two weeks, during the trial. If any other food except hay be given, (such as roots or meal,) the same quantity to be given to each, that the result in relation to the cutting the hay be not affected by other food. The animals to be kept in the same stable. and at the same temperature. Each animal to be weighed at the commencement of each two weeks, and at the close of the experiment. The same kind of hay (what is usually called English hay) to be used during the whole time. The time of giving food and drink to be regular, and also of milking. The time of weighing to be in the morning, and before the animal has been allowed to drink."

There were four competitors for the premiums—Messrs. DEMOND, DODGE, LINCOLN, and HAWES.

Mr. DEMOND's experiments were on two cows, seven years old, dried off the 10th of December, 1851. The experiment commenced Jan. 1, 1852, and lasted eight weeks. In addition to the hay, each cow was allowed a half peck of turneps per day, or seven bushels to each cow during the experiment, which are considered equivalent to 58 lbs. of hay.

Mr. DODGE's experiments were with two steers, both three years old this spring. Trial commenced 3d of Jan., 1852, and continued eight weeks. Each steer, in addition to the hay, was given two quarts of meal per day, which is equivalent to 298 lbs. of hay for each steer during the eight weeks.

Mr. LINCOLN's experiments were with two milch cows, four years old each; one calved the 14th and the other the 20th of June, 1851. Trial commenced 9th of Jan., 1852. In addition to the hay, each cow eat 648 lbs. of carrots, equivalent to 171 lbs. of hay.

Mr. HAWES' experiments were on two working oxen, seven years old each this spring.

Trial commenced 15th Dec., 1851. The cattle being kept pretty regularly at hard work during the whole eight weeks of the experiment. They were allowed nothing but hay. The following table will show the final results of the experiments:

	C. B. Demond. Dry Cows.		Harvey Dodge. Steers.		W. S. Lincoln. Milch Cows.			A. H. Hawes. Working Oxen.	
	Weight of hay consumed in 8 weeks.	Gain in weight of animal during 8 weeks.	Weight of hay consumed in 8 weeks.	Gain in weight of animal during 8 weeks.	Weight of hay consumed in 8 weeks.	Gain in weight of animal during 8 weeks.	Milk yielded in 8 weeks.	Weight of hay consumed in 8 weeks.	Gain in weight of animal during eight weeks.
	lbs.	*lbs.*	*lbs.*	*lbs.*	*lbs.*	*lbs.*	*lbs.*	*lbs.*	*lbs.*
Cut	1171	64	916	80	1150	180	483	2106	137
Uncut	1149	56	946	60	1130	80	417	2106	93
Mean weight of animal,	892 lbs.		1110 lbs.		900 lbs.			1567 lbs.	

It is seen that in every one of the experiments there is a greater increase of animal from the cut than from the uncut hay; the difference in the quantity of milk is small, but in favor of the cut food. It is, in our opinion, to be regretted that the same animal was not kept on the same food during the whole length of the experiment, and not have changed them every two weeks; for in such a short period it is very doubtful if the scales will at all indicate correctly the actual gain in fat or flesh of the animal. There is no doubt, however, but what the experiments were conducted with great care and accuracy, and the results are so uniform as to confirm the opinion of those who think it good economy to cut even *good* hay. Mr. Hawes makes the following remarks in his statement to the committee:

> "A great advantage in cutting hay at least for working stock, was very obvious during the whole of this experiment; before the ox feeding on uncut hay had gotten one half through with his allowance, the ox which had cut feed had eaten up what was given him and was laying down taking his rest; and this, at noon when but little time is allowed for eating and rest, must be an advantage of no small importance."

Mr. W. S. Lincoln says:

> "Some time before commencing this experiment, I was feeding to my stock what would be called poor stock hay, with an allowance of roots. I commenced cutting this hay for all my stock, young and old, (16 head,) occupying me about an hour and a half daily. Almost simultaneously with feeding the cut hay was an increase of milk, very perceptible as it was milked in the pail. From day to day the milk increased so, from the stock I have described, as to require the substitution of six quart for four quart pans, which had been previously used. I think I am within bounds in saying the increase was over a pint daily per cow, occasioned, to the best of my knowledge, solely by the use of cut hay."

The first premium was awarded to Mr. Lincoln, and the second to Mr. Hawes.

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SOOT AS A FERTILIZER.

A statement has lately been extensively circulated by the agricultural press, respecting a recent discovery by Dr. Penny, in Scotland, who found a very large quantity of potash in some soot taken from a *blast* iron-furnace flue, amounting to about 50 per cent. of carbonate and sulphate of potash; and it is thought that this kind of soot will soon be extensively used for the manufacture of these important and expensive salts. The mineral theory advocates, or those who assert that the only elements that are needed by plants are those of a mineral nature—such as potash, soda, phosphate of lime, silicates, or the ash constituents of the plants to be grown,—and that the crops on a field increase or diminish as these are withheld or supplied, independently of organic matter, have seized upon this discovery as one that affords strong evidence of a practical nature that their theory is correct; hence they exultingly say, "Here, in this discovery, we have the cause explained of the well known value of soot for agricultural purposes."

It *is* a "well known" fact that soot is of great value for agricultural purposes; especially is it found a valuable manure for wheat and other cereals, and sells for this purpose in the English towns at from twelve to twenty cents per bushel. Dr. ANDERSON says of it: "I have used soot as a top-dressing for clover and rye grass, in all proportions from one hundred bushels per acre to six hundred, and I can not say that I ever could perceive the clover in the least degree more luxuriant than in the places where no soot had been applied; but upon rye grass its effects are amazing, and increase in proportion to the quantity, so far as my trials have gone." And his general conclusion is, "*that soot does not affect the growth of clover in any way, while it wonderfully promotes that of rye grass.*"

But we need not quote experiments, for it is universally admitted to be a most powerful and efficacious manure for all *cereal* crops. And this fact,—if it were true that the soot generally used for agricultural purposes contained 40 per cent. of potash—would indeed be a most potent argument in favor of the mineral theory; but this is not the case. A sample of soot analyzed by M. BRACONNOT, taken from a chimney where wood had been the fuel, was found to contain the following ingredients:

Ulmic acid,	30.0
Nitrogenous matter, soluble in water,	20.0
Insoluble carbonated matter,	8.9
Silica,	1.0
Carbonate of lime,	14.7
Carbonate of magnesia, (traces of.)	
Sulphate of lime,	0.5
Ferruginous phosphate of lime,	1.5
Chloride of potassium,	0.4
Acetate of potash,	4.1
Acetate of lime,	5.7
Acetate of magnesia,	0.5
Acetate of iron, (traces of.)	
Acetate of ammonia,	0.2
An acrid and bitter element,	0.5
Water,	12.5
	100.0

This analysis is also confirmed by M. PAYEN and M. BOUSSINGAULT. The latter, speaking of the soot from coal, says: "The superior qualities of coal soot are evidently due to two causes: first, it is more dense than wood soot, and in a given bulk actually contains a greater amount of matter. Secondly, I have found that for equal weights *coal soot contains the larger quantity of nitrogen.*"

There can, we think, be little doubt that the good effects of soot as a manure are owing to the large amount of nitrogen and ammonia it generally contains. There is, however, a difference in the composition of soot, owing, it is thought, principally to the draught and the height of the chimney—the soot from a high chimney being considered the best, and it actually sells for half as much again as the soot from a low chimney. Is not this owing to the fact that the inorganic matter (the potash, lime, soda, &c.,) is merely carried up the chimney mechanically by the draught, and settles much sooner on the sides of the chimney than the organic matter, (nitrogen, &c.;) so that the higher the chimney the richer would be the soot in nitrogen, and the more valuable?

The analysis of Dr. PENNY is doubtless correct, but it by no means represents the composition of the soot generally used for agricultural purposes. The intense heat and draught (an immense pair of bellows worked by a steam engine is usually employed to create the blast) probably sublimates the potash, and the draught carries it up the chimney, where it would lodge on any protuberance; and the position in which the soot examined by Dr. PENNY was found favors this idea.

Soot may be used with great benefit for wheat, either as a top-dressing or plowed under, at the rate of thirty bushels per acre. We prefer using it in the fall, which is indeed the best time to sow guano, sulphate of ammonia, or in fact any manure for the wheat crop. It gives the plant a strong and vigorous growth in the fall, and enables it much better to stand the winter, while on good strong soils there is little danger of much of the fertilizing matter being washed out by the rains, except where water is allowed to stand for considerable time. It has been recommended by some, to mix unleached ashes or lime with the soot previous to sowing: but this is a bad practice; for either of them will set free the ammonia, which escapes into the atmosphere, and leaves the mixture comparatively valueless as a manure for wheat.

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MANAGEMENT OF BARN-YARD MANURE.

At the present day, no subject connected with agriculture is receiving so much attention, and deservedly so, as that of *artificial* manures—substances manufactured, or brought from a great distance at much cost,—while the manufacture of guano at home, in the barn-yard, is either altogether neglected or imperfectly attended to; and while we are far from wishing our farmers not to purchase artificial or manufactured manures, we think—we are sure—it would be greatly to their interest, to know more about the composition of the manure of the hog-pen, the horse-barn, &c., and the *reason* of its beneficial action on *all* soils.

On this subject there is great diversity of opinion among scientific men, and also among the farmers themselves. Some farmers assert that manure is not worth the expense of hauling and spreading on the soil, while others think it is never applied but with benefit to the subsequent crops. There is doubtless a reason for this difference of opinion. The former was probably formed by drawing on the land a substance *resembling* good, rich manure—made perhaps by cattle eating nothing but straw, and allowed to remain in the yard till all that was soluble was washed out of it, and what little ammonia it at first possessed evaporated into the atmosphere. We agree with the farmer who thinks such a manure hardly worth the labor of drawing out; at the same time we think that manure "as is manure" is never used without great benefit. We once more assert—and shall continue to repeat it till disproved, or farmers *act upon it*—that the composition and value of all manure depends, not on the animals making it, but on the composition of *the food consumed*—that the more nitrogen the food contains, the more *ammonia* there will be in the manure, and the more valuable will it be to apply to all the cereal crops.

Some farmers who understand this, and keep their stock on proper food, manage the manure they make so wretchedly that its value is lessened in many instances one-half. Then, again, some let the liquid excrements of the animals (and they are by far the most valuable, containing all the alkaline phosphates and nine-tenths of the ammonia,) run to waste, and are thus not only lost to the farm, but fill the atmosphere with gases injurious to animal life.

To prevent these losses, should be the great aim of the scientific farmer. The buildings should all be spouted, and the water not be allowed to run on the manure except at the discretion of the farmer, if this is done, there is sufficient waste straw on the farm to absorb all the urine made. The next precaution will be not to let the horse dung remain in a loose heap, close to the stable door, sweating and fuming, sending off all its ammonia, the most valuable ingredient, into the atmosphere; but it should be mixed with the cold and sluggish hog and cow manure, which would prevent a too rapid fermentation and the loss of so much ammonia. Compression, by excluding the air, will also check decomposition. Yet it is desirable that the manure should ferment, and the bulk and weight be considerably reduced, without losing any of its elements of fertility. This can be done by preventing leaching and the evaporation of ammonia. The latter is a somewhat difficult operation, and various plans have been recommended without much success. Sulphate of lime, or plaster, when dissolved in water, will decompose carbonate of ammonia, the sulphuric acid of the lime uniting with the ammonia, forming sulphate of ammonia, while the carbonic acid attaches itself to the lime, forming carbonate of lime; and as sulphate of ammonia is an involatile salt, and of great value as a manure, sulphate of lime has been repeatedly recommended for this purpose. But it will only act in this way when in solution; and as it requires 460 lbs. water to dissolve one pound of sulphate of lime, its beneficial effect is very limited, and it can only be recommended as useful to fix the ammonia in cess-pools, sewers, and other liquid manure, and not to scatter on the surface of fermenting horse dung, &c. Sulphuric acid in a pure state, mixed with water, has also been recommended; and the acid undoubtedly will "*fix*" the ammonia already formed in the manure; but as it will check any further decomposition, it cannot be recommended. Superphosphate of lime has been used for this purpose with the most complete success. Scattered under the horses, or upon a fermenting manure heap, it immediately prevents the escape of ammonia. The high price of the article, however, is against its economic use for this purpose; yet if farmers would only save all the bones in the neighborhood, and learn how to manufacture the superphosphate themselves, it would be found the cheapest and best of all ammoniacal fixers. Finely pulverized clay is a great absorbent of ammonia, and the covering the manure heap with a loam containing considerable clay, would retain a greater part if not all the ammonia, if decomposition was not allowed to proceed rapidly.

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CHEESE-MAKING FROM A SMALL DAIRY.

We have received requests from several of our lady correspondents, to write a short article on cheese-making especially in reference to that large class of farmers who keep but few cows. It always gives us pleasure to comply with the requests of the ladies, especially of those who are good house-keepers — know how to milk a cow, make good butter and cheese, and cultivate a small flower-garden.

First rate cheese can be made from a few cows, but it is attended with more labor in proportion to the amount made, than in a large dairy, inasmuch as the curd has to be made every morning and placed aside till you have sufficient to make a good sized cheese. The milk is placed in a tub, and warmed to the proper temperature (95 deg. Fahr., or about as warm as when taken from the cow,) by adding a portion of heated milk. The rennet is then added, the milk well stirred, and afterwards let alone till the curd is well come. The time this occupies varies from fifteen minutes to two hours, according to the amount of rennet, the temperature, &c. — the hotter it is put together, and the more rennet there is added, the quicker will the cheese come. As a general thing, the longer it is in coming, the tenderer and sweeter will be the curd. If it comes too quickly, it is owing to an excess of lactic acid being formed from the sugar of milk, so that the curd has that hard, tough, white appearance that is the case when the curd is precipitated by vinegar, or any other acid; but if there is a very slow formation of lactic acid, the curd is gradually precipitated in flocks, is less dense, and very sweet and tender. It is then broken up quite fine, either by hand or a curd-breaker made for the purpose, which cuts it into very small pieces. After this it is allowed to stand and settle. The whey is then drawn off and passed through a seive, to remove any curd there may be in it. The curd is then placed in a strong cloth, and well pressed, to remove the whey. It is then placed in a cold place, and the operation repeated daily—or every other day, if the milk will keep sweet, as it will in the fall—till there is curd enough to make a cheese of the desired size. When the right quantity is obtained, the curd is all broken up very fine, salted, and well mixed. In putting the curd in the vat to be pressed, a cloth sufficiently large to cover the whole cheese is placed in the vat, and into this cloth the curd is put. When the curd has filled the vat, a "fillet," (usually made of sheet tin, and from three to six inches wide, and sufficiently long to lap over four or five inches when placed round the cheese,) is placed inside the vat for an inch so, and the cloth drawn up straight, so that when being pressed the fillet will not cut it. The whole of the curd is then put in, the cloth turned over the top of it, a smooth board placed over this, and then it is ready to press. After it has been pressed for some time, it is taken from under, and punctured all over with a skewer, either of wood or iron. Place it in the press again till it has become sufficiently consolidated to take out of the vat without falling to pieces. It must then be turned, or inverted in the vat, and a clean cloth put round it. Place it again under the press, occasionally turning it and putting round it fresh cloths, till the cheese when pressed does not wet them. It is then all right, and should be kept in the dairy, or other cool, damp place, for a few days, placing a little salt round it, when it may be taken to an upper room, where it will require turning very frequently, or the side next the floor will mold. Let the room be dark and well ventilated. (See our remarks on *Butter and Cheese-Making*, in the May number, page 143.)

A cheese press may be purchased for about $5; and the cost of the vats, fillets, &c., is very trifling; so that it is to us surprising that so few farmers with from four to ten cows ever make any cheese—not even enough for their own consumption. Good cheese sells for nearly as much as butter, and yet a cow will give, to say the least, as much again cheese as she will butter. It is true the whey is not so good to fat hogs as the sour milk, yet it contains much nutritive matter, and is a valuable food for shoats, or a good drink for fatting hogs; yet we think it would be more profitable to make cheese at the present relative prices of the two articles, than butter.

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RUTA BAGA AND COMMON TURNEP CULTURE.

Though roots as a class contain from 80 to 90 per cent. of water, yet it is generally conceded that more *nutritive* substance can be obtained per acre from them than from the cereal or leguminous plants; in fact, more than from any other plants cultivated. And this is not all; they are found by universal experience to be the best preparative for the wheat and barley crop; and when consumed on the soil, greatly increase the yield. Their cultivation is now just beginning to be adopted in this country, and we are much pleased to receive so many inquiries respecting the best method of preparing the soil, manures best adapted, &c., &c.

Ruta baga is probably the best root of the turnep class adapted to this climate; it is not so affected by drouth, and will stand the winter better than the common white or yellow turnep. The soil should be well pulverized and rich, and the seed drilled on ridges about twenty-seven inches apart, and when in the rough leaf the plants must be singled out with the hoe about a foot from each other, and kept clean. The first week in July will do to sow ruta baga, but they do better sown the middle of June. The present month, however, is the right time to sow the common turnep. These, though we prefer sowing them in drills the same as ruta baga, as they are then much easier to keep clean, admitting the use of the horse-hoe, will do sown broadcast, and will, if hand-hoed and kept clean, sometimes yield a much larger crop than when drilled.

We have seen a good crop of turneps that were sown after the wheat crop with one plowing, and sown broadcast at the rate of one pound of seed to the acre; but they were hand-hoed, costing about $1.50 per acre: and we would say, as the result of some experience, that it is vain to expect a good crop of turneps, in nine cases out of ten, without hoeing them.

We would earnestly recommend the sowing of more root crops on the farm; and we believe that it would pay every farmer to sow five or six acres of the common turnep in the way we have recommended, after a wheat or barley crop. They could be eaten off on the land late in the fall by sheep, and the manure made by their consumption would be of great value to the following corn crop. It would even pay to sow the turnpes after a grain crop, and let them rot on the land for manure. In this case they need not be hoed, and might be sown perhaps a little thicker. Their value in a system of rotation consists principally in collecting nitrogen from the atmosphere, which, whether allowed to rot on the land or consumed by stock and the manure returned to the soil, will be of great value to the subsequent crops. Indeed, it is to this artificial accumulation of nitrogen in the soil, by growing root crops, clover, and other leguminous plants, that we must look for an increase in our present yield of wheat, barley, corn, and other cereal crops.

A FEW WORDS ON GROWING CLOVER SEED.

THE largest yield and best quality of clover seed is obtained by pasturing the first year's growth of clover till the last week in May, and then taking out the animals, destroying any Canada thistles, docks, May weed, &c., that may happen to be in the lot, thus insuring clean seed. It is, however, a more general practice to take a crop of clover hay first, and then allow the second growth to go to seed. In this case the first crop should be mown as early as possible; for the great difficulty in obtaining a large yield of clover seed is early frosts, which often check the growth of the clover before the seed is fully matured, and a small crop with an inferior quality of seed is the consequence. When the first crop is pastured or cut very early for hay, the second crop is of course much earlier, and the seed is elaborated perfectly under the influence of warm weather, while you have much better weather to gather in the crop. If, however, the crop is late, it may be allowed to stand as long as it will grow; for the frosts do not injure the vitality of the seed, but merely checks its growth. Three bushels of clean seed to the acre is about an average yield, though much larger crops are sometimes—and may be oftener—grown.

Clover being a leguminous plant, allowing it to go to seed does not impoverish the soil to that extent as do the cereal crops, which specially exhaust the soil of nitrogen, while clover obtains the large quantity of nitrogen which it contains from the atmosphere; so that by growing clover seed the soil is not materially impoverished or the following corn crop much injured.

We make these remarks in the hopes that they may induce farmers more generally to grow at least sufficient clover seed for their own use, believing that they will seed more land down to clover every year if they do so, than if they have to give their neighbors or city seed-store men four or five dollars per bushel for it, and *knowing* that the yield of wheat and corn crops will bear a pretty constant proportion to the amount of clover grown and used on the farm. If farmers would make it a rule, with exceptions only in uncommon cases, never to sow wheat or barley without in the spring seeding down the land with ten or twelve pounds of Red Clover seed per acre, the increased acreage yield of grain would much more than make up for the fewer number of acres sown; while the greater quantity of stock the land would thus be able to maintain, would greatly enhance the profits of the farmer.

THE PROPER TIME TO CUT WHEAT.

Much difference of opinion exists between purely theoretical and purely practical farmers, in regard to the proper time when wheat and other grain crops should be cut. The theoretical farmer says it should be cut while quite green—say fourteen days before it is ripe,—while most practical farmers think it should be quite ripe before cutting. The early cutting advocates advance not only a very plausible scientific reason for their opinion, but give numerous experiments which confirm the deductions of science. The arguments in favor of early cutting may briefly be stated thus: The grain and straw of wheat contain starch and sugar, a portion of which, if the grain is allowed to get quite ripe, is converted into woody fibre, or bran; while if cut green, these would remain unchanged in the grain, and the wheat would yield more flour of a superior quality with considerable less bran. Another reason is, that the straw when cut green is of much more value as food for cattle, containing starch and saccharine matter which if allowed to get fully ripe is changed into woody fibre, and its nutritive qualities greatly reduced; and then there is less loss by shelling when the crop is cut green than when fully ripe.

We think the true course lies between the two extremes; for while we would by no means cut wheat fourteen days before it is ripe, feeling satisfied from numerous practical experiments that there would be much shrinkage and a loss, (not perhaps to the miller, but to the farmer,) yet we would equally avoid letting the grain get fully ripe. As good a practical test as any we know, of the right time to cut wheat, is to take a kernel between the end of the finger and the thumb joint, squeeze it to a pulp, and if there is no milk or sap at all in the grain, all circulation and growth have ceased, the wheat derives no more nutriment from the soil, and will be better cut up than standing; the straw for an inch or two below the ear will be found to be white, and to have lost all its sap. And now, as the world-renowned reapers give the farmer the control of the harvest, he need not fear that a portion of it will get over-ripe before it can be harvested, and much be lost by shelling, as was formerly often the case where there was a large breadth of wheat to cut and cradlers could not be had at any price; therefore it is not necessary to commence operations till the grain is in a fit state for cutting.

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Woodman, Spare that Tree.—To those who live on the great prairies of the west, where every tree is a friend reminding them of a once loved but forsaken eastern home—a connecting link between the past and the present—I need not say *spare the trees.* There the noble tree is prized for its beauty, its shade, and its timber,—it is sought by the dweller on the prairie, like the "shadow of a great rock" by the way-worn eastern traveler. But those who make a new home on timbered land, where the trees are to be felled before they can raise the necessaries of life, get a passion for the destruction of trees, looking upon them as their natural enemies, until they find, too late, that they have carried the war a little further than was necessary—even further than either profit or pleasure required. To those who are clearing land of timber I have a word to say—and I wish to say it just at the present season of the year, when nature puts forth all her beauty. After a few acres are cleared, requiring attention during summer, most of the chopping is done in the winter season, when the trees are not seen in their beauty, and scarcely one is spared. Let the farmer now look at the trees arrayed in all their beauty, when the green leaves are so beautifully green, their shade so grateful to every living creature, and resolve hereafter to spare a few trees on the road-side—a little grove in the corner of the field, and around his house,—and he will receive the grateful acknowledgements of his flocks and his herds, the thanks of his neighbors and all that pass by.

Condensed Correspondence.

HOW TO PREVENT CUCUMBERS FROM BEING DESTROYED BY THE STRIPED BUG.—I suppose there are very few persons who have raised, or attempted to raise cucumbers, who have not been annoyed by the above named insect. I have often had my entire planting destroyed by them within a few days after the plants appeared above ground—all preventives to the contrary notwithstanding. For a long time I have thought there was no remedy, save in the application of the *thumb screw*. This year, however, I have covered each hill with a box without top or bottom, the sides being eight or ten inches high, leaving two hills uncovered. The result is, the hills exposed are entirely destroyed, while the others have not been injured in the least and are flourishing finely. This method, doubtless, is known to many, and all who wish to raise cucumbers would find a great saving of vexation by putting it in practice. S. H. A.—*Canandaigua, N. Y.*

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BEE ROT.—In the March number of the Genesee Farmer, page 100, D. G. FORT says he finds his bees affected with what he calls the "Bee Rot." Having had some experience as an apiarian for a number of years, and also noticed the same evil that he has described, I have uniformly found that my strongest and best swarms are most likely to be affected—feeble and late swarms always escaping.

The Cause.—I will give my views as to the cause, which, to me, is perfectly satisfactory. The fact that the swarms that in early spring are the greatest sufferers, I can attribute to no other cause than the result of a severe frost or a very cold night. The swarm being in a thriving condition, the Queen hastens to perform her office, depositing her eggs in the cells at first moderately, until the stock of working bees are to some extent increased, and then more rapidly; and being a little in advance of the season, and there not being bees enough hatched to produce a sufficient degree of heat, a cold night (or day) comes and the dire calamity befalls this thriving colony. And as all of the thriving swarms are not alike affected, I am led to infer the brood is more exposed to this malady at some stages than others, and the remedy would be comparatively easy if we knew which hive stood in need of it.

The Remedy.—By observing the weather a little, you will be able to determine when the remedy should be applied; all you want is to keep up a usual degree of heat in the hive. This may be done by placing straw or cloths around the hives, sufficient to produce the desired effect, and you have the remedy. J. D. C.—*Locke, N. Y.*

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A GOOD COW.—Believing for a year past that I had a cow possessing extraordinary qualities for milk and butter, I resolved on giving her a trial. Accordingly, on the morning of the 30th of November last, (the third week after calving) she was carefully milked, and her milk weighed and put in pans and kept alone with her name, "Devon," put on every pan so as to prevent the possibility of a mistake. This care was followed to the evening of December 6th, making seven days. Her yield of milk for each day was as follows:

First day, 53 lbs.; second day, 56 lbs.; third day, 64½ lbs.; fourth day, 54 lbs.; fifth day, 56 lbs.; sixth day, 56 lbs.; seventh day, 58 lbs.; total, 397½ lbs., in seven days, and measuring 46 gals., 3 qts., and 2-17 of a pint—making nearly 6 gals. and 3 qts. per day.

The butter, when thoroughly worked and ready for market, weighed, in the lump, 21 lbs. 10 oz., worth 25 cts. per lb.—$5.40.

Her feed during the week of trial, was 1 qt. of cake meal, and 3 qts. of corn meal, weighing 5½ lbs., made into a mash, night and morning; at noon, 4 qts. of wheat bran, weighing 3 lbs., made into a slop with hot water, and given warm, and the same at night at 9 o'clock—making 17 lbs. of corn meal, cake meal, and wheat bran, united, for each 24 hours; or 119 lbs., neat weight, for the week, which was worth, at mill prices, $1.28, or 18¼ cts. per day. The hay that she eat I suppose to be 150 lbs., (I did not weigh it) worth 75 cts., making cost of keeping, during the week, $2.03.

The above cow appears to be part Devonshire, mixed, perhaps, with Ayrshire, of a red color, except her udder and a stripe under her belly, which are white. She is of a large size, (say five hundred,) of beautiful symmetry, and is about seven years old. She carries the French marks of about a fourth rate cow—if I understand them. She gave as much milk last May and June, after having been milked eight months, as my fresh cows (say 5 gals. per day) that were making their 10 lbs. a week. She continued to give milk forty-four weeks in the year, although the pasture the latter part of the season was very poor—and she had nothing else. ISAIAH MICHENER.—*Buckingham, Bucks Co., Pa.*

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UNLEACHED ASHES ON POTATOES.—E. HAMMOND, of Schoharie Co., N. Y., stated in the April number of the Farmer that when unleached ashes were applied to potatoes, at the time of planting, "*wherever the ashes and the tuber come in contact there was rottenness in every instance.*" Unleached ashes will destroy any vegetable with which it comes in contact, and indeed almost any animal substance, and should never be applied directly to plants, or to the roots of trees, or so as to come in contact with the bark, unless in very small quantities. After the potash is abstracted by leaching, they are perfectly innocent and can be applied in almost any quantities. I have spread unleached ashes on the ground before plowing, and used them as a top-dressing before hoeing, and always believed myself well paid by an increased crop; though I am not able to say that so far as the rot is concerned, any effect was apparent. I have been long convinced that no crop destroys potash like potatoes. Some years ago, before I had engaged in farming, I purchased, near the city, half an acre of ground and planted it with peach trees. It was new land, potatoes having been raised on it only one year, and the crop stated to be 125 bushels. Thinking that potatoes would be the best crop for the trees, I planted them four years in succession. The first year I had 70 bush., good; the next year about 35 bush., and rather small; the next year I offered them to any one who would dig them, and failing in this they were never dug; the next year I put on about twenty-five loads of ashes, and the yield was eighty bushels. J. W.—*Brighton, N. Y.*

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PATENT GALVANIZED IRON.—I have noticed of late numerous recommendations of "Patent Galvanized Iron" as an article of great importance to farmers, mechanics, builders, &c., &c. It is particularly recommended for Roofing, Wire Fencing, Telegraph Wire, Lightning Rods, Sheathing for Vessels, &c., and it is urged that it is a cheap and durable material for these and divers other purposes. With the limited knowledge which people generally possess of this article, there is great liability to be deceived by it, and I doubt not that the high expectations which may be formed of its value, for many of the purposes for which it is recommended, will be disappointed and much money will be uselessly expended upon it.

For wire fencing, it is probably no better than ordinary ungalvanized wire. When the coating gets rubbed off, as it inevitably will in places, the wire is supposed to corrode faster than it would had it never been coated. This is probably owing to the action of the acid used in galvanizing upon the wire.

Galvanized wire has been used somewhat extensively in this country in the construction of telegraph lines, but for that purpose it is now thought to be less desirable than ordinary wire, and it is probable that no more of it will be put to that use. An enormous price has heretofore been charged for this article, notwithstanding the galvanizing is very cheaply and rapidly done. I would advise farmers and others to be well satisfied of its utility before paying a high price for it, or using it extensively. M.—*Rochester, N. Y.*

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VIRGINIA LAND.—Having received several letters of inquiry from various persons, in reference to my article on "Virginia Lands," and finding myself unable to reply to so many, without neglecting the duties of my profession and attention to my farm, I beg leave to trouble you with a second, and *final* article on the subject in the Farmer. This will embrace, as far as practicable, a full reply to every question, as well as whatever else I think of interest.

1. *Soil—Productions.*—Every variety of soil abounds—the stiff, red clay, with a mixture of mica—a brown chocolate, *slaty*—the light grey, sandy, chinquepin—the mulatto—and pipe-clay soils, in some parts. A farmer of my acquaintance, who has travelled a good deal, particularly in the south and south-west, remarked to me not long since, "that he had never seen land better adapted to clover, or that improved more rapidly from the use of gypsum, than some of the land in this vicinity." I have several fields well set in clover, sown last spring, which have received no other help than a little gypsum, in which the seed was rolled. My soil is a light grey, sandy one, well adapted to the production of tobacco of the finest quality, such as, if properly managed, will bring $30 per cwt.

The soil generally is well adapted to the growth of tobacco, corn, and oats; tolerably well to wheat, and might produce it *very* well if proper attention was paid to its cultivation. Most time and care being devoted to tobacco, the land is never manured for other products. Maize is hastily planted in April, and hurriedly worked over two or three times, and then "laid by" until ripe. Yield, from ten to fifty bushels per acre. Wheat is generally sown on the tobacco lots after the tobacco is housed. Usual time for sowing, from the 20th of October to Christmas. Oats are sown in the spring on the corn land of the preceding year. Rye and buckwheat are grown by but few; they now succeed very well.

Wheat is now worth 80 cts; corn, from 80 cts. to $1; rye, 75 cts.; oats, 50 cts. The high price of the three last are owing to last year's drouth. Average prices, for wheat, from 75 cts. to $1.25 per bu.; rye and corn, 40 cts. to $1; oats, 25 cts. to 50 cts.; tobacco, $5 to $50 per cwt.; field peas, 75 cts. to $1 per bu.; onions, $2 to $4; Irish and sweet potatoes, 50 cts. to $1; clover seed, $4 to $5; dried apples and peaches, $1 to $2.

These, with some few cattle and horses, are our principal staples and subjects for sale in market. Our Market towns are, Danville, in this county; Richmond, 120 miles distant; Lynchburg, 40 miles; and Petersburg, Farmville, and Clarkesville, from 50 to 60 miles distant. These places are becoming more and more accessible by means of railroads and canals, made and being made, through this part of the State. The Richmond and Danville Railroad is in process of rapid erection, and passes through this county. The Virginia and Tennessee Railroad, commencing at Lynchburg and extending to the State line, passes through the adjoining county, Bedford. The James River and Kenahwa canal, commencing at Richmond, extends 40 miles above Lynchburg. And finally, there is a Bill before the Legislature, with every prospect of being passed, for a Plank Road from Pittsylvania C. H. to Lynchburg, 55 miles. Thus, the facilities of getting to market, though somewhat limited now, will soon be such as to enhance the value of lands, and add much to the resources of the country.

The easiest and most direct route to this county from New York, is by Baltimore and Washington to Richmond, thence up James River; or, by land, on the railroad and by stages.

Fruits of various kinds grow well, and people are beginning to pay much attention to the culture and propagation of improved stocks. Peaches, of fine qualities, and their kindred, grow in great abundance, and without much attention; while apples, pears, &c., require attention to succeed well. The vine succeeds admirably, though no one has yet turned his attention to making wine. Currants, gooseberries, raspberries, and strawberries, are abundant. The latter grow wild in great profusion, in old, uncultivated fields. Forest trees are large, abundant, accessible to saw mills, and well adapted for lumber.

Of the various trees, I may enumerate the Pine, Tulip, Chestnut, seven varieties of Oak, Hickory, &c., which are common everywhere. The Walnut, Locust, Wild Cherry, Maple, Sycamore, and other useful lumber trees, are found in various parts and bring remunerating prices in market. Lumber is worth from $1 to $1.50 per hundred; shingles, of heart-pine, from $2.25 to $2.50 per thousand, in the county—at the stump, $3, if delivered.

2d. *The Climate.*—This is mild. But little snow falls in the winter, and does not remain longer than a day or two at a time. The winters, indeed, are so mild, that we sometimes are unable to procure ice, unless the ice ponds are in northern exposures, and very shaded situations. The face of the country is undulating, the water generally excellent, and the climate so salubrious that the services of many physicians are not required. I frequently ride twelve and fifteen miles to see a patient, and in the course of three years' practice I have had only two cases of *Fever and Ague* (they contracted elsewhere) and one of *Billious Remittant.* This is not asserting that all parts of this section of Virginia are universally healthy.. In some parts, especially larger water courses, Intermittant and Remittant Fevers do occur, but not to any great extent. I think I may safely say, that we have no diseases endemical to this country, though we have our share of the epidemics which prevail throughout the United States, with the exception of Cholera.

Finally. *Education and Morals.*—Primary schools and high schools of superior merit, are accessible. The minds of the people are becoming fully aroused to the importance of attention to the subject of Education. Churches are scattered, at intervals of eight or ten miles, throughout the country. Preaching at the country churches is held twice a month, and the days are so arranged that persons, if they choose, can conveniently attend services nearly every Sabbath. The Baptists (missionary) are most numerous. We have, however, some Presbyterians, Methodists, and Episcopalians. The three last have each a church at Chatham, our county seat.

This is as much as I have time to write, and more, I fear, than the *Farmer* may be willing to publish. People who wish to know more, will have to do like the Queen of Sheba, come to Jerusalem to see for themselves, "for the half has not been told them." S. AUGUSTINE WALKUP.—*Pittsylvania Co., Va.*

Horticultural Department.

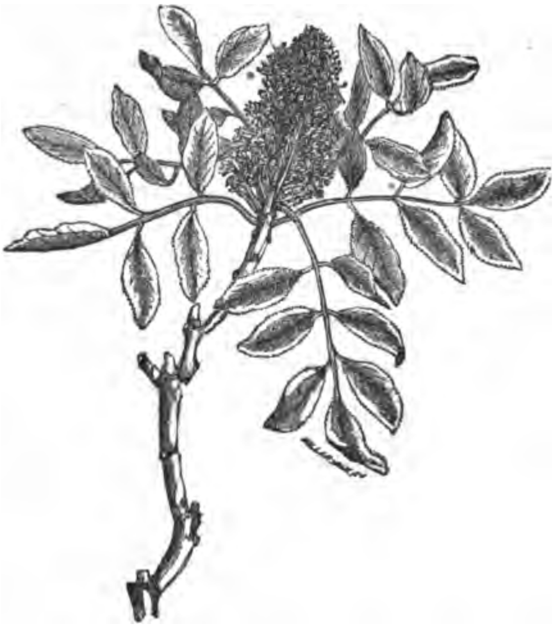
CONDUCTED BY P. BARRY.

SPRING-FLOWERING TREES AND SHRUBS.

There is a great want of information on the subject of ornamental trees and shrubs. With the exception of the *Horse Chestnut*, the *Mountain Ash*, the *Lilac*, and *Snowball*, the great variety of ornamental trees and plants enumerated in nursery catalogues are comparatively unknown. Ornamental planting every year attracts more and more attention — information on the subject has become a matter of every-day inquiry, and we have really no cheap treatise on the subject, such as our works on fruit culture, that we can refer to. To aid a little in supplying this deficiency, we propose henceforward, as opportunity may offer, to notice briefly the most desirable hardy trees and shrubs for limited collections. We shall begin with the

FLOWERING ASH; (Ornus europæus.) *Syn.* — Fraxinus ornus.

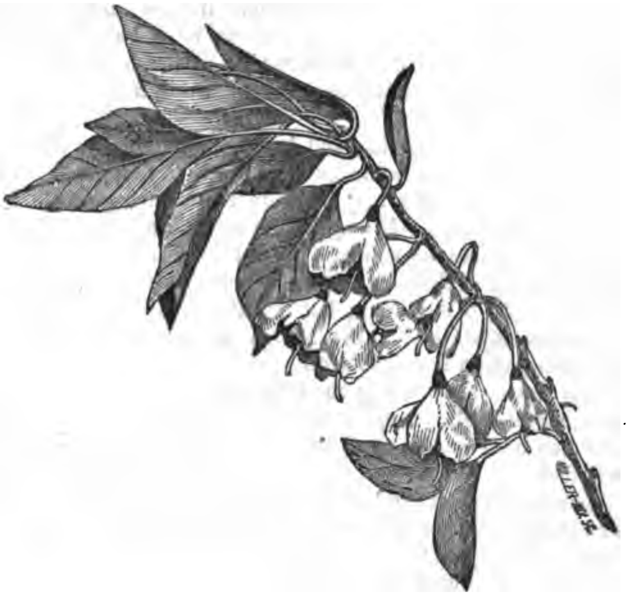
This is neither a rare nor a common tree, a native of the south of Europe, but introduced into this country a long time ago, and widely disseminated, but confined to larger collections of trees. There is an American species, so similar in appearance as to be pretty generally believed to be only a variety. It resembles the common ash in its general features. Habit stiff and erect; with grayish bark; stout, blunt shoots; and large, dark buds. Leaves consisting of three or four pair of elliptic or lanceolate leaflets. Flowers, which appear in the latter end of May or beginning of June, are of a greenish white, produced in large clusters or panicles on the ends of the branches. These clusters are shorter than the leaves that surround them; and when the tree is in full bloom, it looks as though a pretty white bouquet of delicate flowers, tastefully encircled by foliage, were placed on the end of every branch. The annexed figure will give a slight idea of the relative situation of the leaves and flowers, and their appearance.



FLOWERING ASH.

It is propagated by budding or grafting — the latter is preferable — on the common ash. It grows slowly, and attains a height, in time, of twenty to thirty feet. Specimens in our grounds, ten years planted, are twelve feet high. In Italy, where this tree abounds indigenously, the sap is taken from it in the summer, as we take the sap from the sugar maple in the spring; and as it cools, it hardens and granulates, and is then called "manna," and is that now generally known in commerce.

THE SILVER BELL, OR SNOWDROP, TREE; (HALESIA TETRAPTERA.)



THE SNOW-DROP.

This is, as very justly remarked by LOUDON, "one of the most ornamental of American deciduous trees, and richly deserves a place in every collection." It grows indigenously in the southern and southwestern States. It has long been cultivated in the nurseries, and may be found in most large collections; but it is by no means common. It attains the height of fifteen or twenty feet, but may be kept within the dimensions of a medium sized shrub, where desirable. A plant in our grounds, seven or eight years old, is not over six feet high, and has blossomed profusely for several years. The leaves are long, pointed, and downy; blossoms pure white, bell-shaped, pendulous, and produced in great abundance on the wood of the previous year; seeds four-winged. Its period of blooming here is in the latter end of May or, in late seasons, beginning of June. It is propagated from seeds; but they seldom vegetate before the second year after planting. It is also propagated from *layers* of the young wood; but they require to be two years in the ground before sufficiently rooted to be removed from the mother plant. This tardiness of the seeds to grow and the layers to root, has no doubt very much hindered its dissemination.

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HINTS FOR JULY.

SUMMER PRUNING must be continued, to regulate growth, by pinching off the ends of too vigorous or irregular growing shoots, and all such as are superfluous. Fruit-bearing may be induced by stopping all such shoots as may not be wanted in the frame-work of the tree. In the case of garden trees especially this treatment is necessary.

Thinning Fruit.—Dwarf pear and apple trees in many cases bear too heavily, and few people are disposed to relieve them of their ill-proportioned load. They are considered as curiosities, and are allowed to exhaust themselves. Those who desire fine specimens, and regard the future health and prosperity of their trees, will reduce the crop to a reasonable quantity. Thinning should not be confined to dwarf trees, but will be highly beneficial in all cases where trees are very heavily loaded. Valuable trees are frequently lost by being broken down or debilitated by an overload.

Budding will commence in the latter part of the month. Plums generally require to be done about this time, unless on such stocks as grow late in the season.

Look to spring grafts, and see that they are not robbed by shoots from the stock below them; tie up any in danger; and check irregular growth.

Strawberry beds, now that the fruit is gathered, will receive attention. Weeds must be all removed and runners cut away. If it be intended to renew the beds by spading down the old plants, the young runners must be preserved and kept clean until well rooted before the old ones are turned in. New beds may be made about the latter end of the month or beginning of August. Do it, if possible, in a showery time, and shade the plants well.

Insects must be watched and destroyed continually. The green and black *aphis*, that infest in great numbers the leaves of the cherry, apple, &c., are easily killed with a solution of tobacco. This may be made by steeping stems in water until it has become as dark as strong beer. It may be put on with a syringe, or the branches may be dipped in it if the trees be young. Several applications may be necessary. The *slugs* that affect the leaf of the pear and cherry, are easily destroyed by sprinkling over them lime, ashes, or dust of any kind; but this also needs to be repeated frequently. *Caterpillars* of various kinds attack the foliage of trees at various seasons. The best mode of destroying them is well known.

Culture.—Keep the ground clean of weeds, and the surface in a finely pulverized state, around all young trees and plants where good growth is desired. When it becomes hard and cracked on the surface, or covered with weeds, growth is greatly retarded.

Layering, one of the best methods of summer propagation, may now be attended to. The greater number of ornamental shrubs, and roses of all kinds, may be thus increased. Spade and prepare the ground well around the plants; bend down the shoots and fasten them in the ground by means of a hooked peg; (the new wood in most cases is the part to lay;) and if a slit be made half through, just below a bud and extending an inch or so above the bud, roots will be emitted sooner and more surely. The top of the layered shoot above the ground should be put in an erect position, and the slit made below kept open: thus the sap is arrested at the cut part, and there forms roots. A layer is but a cutting not quite separated from the mother plant, but allowed to derive some support from it until it has formed roots of its own; hence more certain.

Budding of roses, and many other things that have ripened buds, may be proceeded with through all July.

Dahlias must be kept carefully tied up and pruned where there is too great luxuriance. Staking is necessary for all tall growing plants in the flower garden or border; if not tied up, they are almost sure to be broken when their heads are heavy with bloom.

Hyacinth and Tulip beds, where the bulbs have been taken up, may now be occupied with petunias, verbenas, heliotropes, salvias, and any other rapid growing bedding plant that will make a good display in the autumn.

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PEARS ON QUINCE STOCKS.

In a late discussion on fruits, which took place at the agricultural meeting at the State House in Boston, Col. Wilder made some interesting remarks on this subject, which we reprint:

> "Much attention has been given of late years to the cultivation of the pear on the quince stock, and in relation to which I have been requested to give the results of my experience. As a general rule, no tree will succeed for any great length of time where it is grafted on any other than its own species. There are, however, exceptions to this rule, and among them, some varieties of the pear, which grow vigorously, bear abundantly, and which seem to be even better adapted to the quince, than to their own stock.
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> "An impression has extensively prevailed unfavorable to the cultivation of the pear on the quince. This has arisen principally from an improper selection of kinds, or from injudicious cultivation. There are, however, three considerations which are absolutely necessary to success, viz., a deep, rich soil,—

the planting of the quince stock entirely below the surface of the ground,—and a systematic and scientific course of pruning, as the tree progresses in growth.

"Objections to this species of cultivation have been made from the belief that the quince was a short-lived tree, and that the crop must necessarily be small from what are termed dwarf trees. Such, however, has not been my experience. On the contrary, I have pear trees on the quince root which are twenty-five years old, and which produce annually a barrel or more of fruit each, and for aught that I can see, they are destined to survive as long as any that I possess on the pear root. These may, and probably have in some instances, thrown out roots from the pear stock, but whether this be so, or not, instances are not rare where such trees have attained in France the age of more than a hundred years, and we know of a quince tree in Massachusetts which is forty years old, and which has produced ten bushels of fruit in a season.

"The pear, when grown on the quince, should always be trained in the pyramidal form. These may be planted in much closer order than when grown as standards. We have known them to succeed well where grown at the distance of six feet apart in the rows. In this way Mr. Rivers, the great English cultivator, planted 2500 *Louise Bonne de Jerseys* and 1500 *Glout Morceaus* for the London market. We consider 12 feet apart, each way, a liberal distance. This would give 302 trees to the acre, and we are clearly of the opinion, that soil and selection of the varieties being right, no crop whatever would be more profitable. Such a plantation, with proper care, would yield, in the fifth year, from 75 to 100 bushels of fine fruit. As to profit, this will not appear as an exaggeration, when it is known that *Glout Morceau* pears, a variety which succeeds admirably on the quince, have sold during the winter readily at one to two dollars per dozen, in our market.

"We name as varieties which succeed well on the quince, the following, and to which might be added many more: *Louise Bonne de Jersey, Vicar of Winkfield, Duchess d'Angouleme, Glout Morceau, Passe Colmar, Urbaniste, Belle et Bonne, Beurre d'Anjou, Beurre Diel, Easter Beurre, Beurre d'Amaulis.*"

We commend the above article to the attention of those who are seeking reliable information on this subject. Col. Wilder's statements are entitled to the fullest confidence. We must add, however, that from what we have seen and learned last season, both at home and abroad, we have concluded to abandon the *Urbaniste* on quince; we feel satisfied it will not be durable. We would add to the above list, *Belle Lucrative, Doyenne Boussock*, and *White Doyenne.* These succeed well, and are indispensable, in our opinion, even in small collections.

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Hand Book of Wines.—The Appletons have published a book under this title, which we have seen noticed in several newspapers. A writer in the *Western Horticultural Review* takes the author (Thomas McMullen) severely to task for his very remarkable and culpable neglect of the wines and wine interests of Aemrica, and concludes thus:

> "It would probably be out of place to anticipate in this article the statistics and facts in relation to the grape culture and wine making in this vicinity, now being prepared by a competent hand, and which will shortly be made public; otherwise we should take great pleasure in offering, for the edification of the public generally, and Mr. McMullen in particular, a statement from materials in our possession, which would go to prove the great extent and importance of this branch of industry. We may say *en passant*, however, that this culture embraces more than a thousand acres of vineyards, many hundreds of laborers, and that there is a value embarked in this business alone, in land, material, fixtures, stocks on hand, etc., that will reach half a million of dollars. We know of three individual concerns, whose vineyards, wine-houses, stocks, and materials, will reach two-fifths of this sum.
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> "In conclusion, we venture the prophecy, that the culture of the grape, and the manufacture of wine in the valley of the Ohio, in the vicinity of this city, is destined to reach a point of importance not yet dreamed of; and which will ere long exert a moral and healthful influence upon society, that the friends of temperance have thus far vainly sought to attain."

No wonder, really, that the wine-growers of Cincinnati should feel slighted in an American book on wines.

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Horticulture in Philadelphia.—A new monthly gardening journal has been commenced in Philadelphia, called the "Philadelphia Florist." We have not seen it, but learn that it is conducted by "a committee of practical gardeners." That city, in many respects, has more of horticultural interest about it than any other in America. In floriculture, especially, this is true, and a journal well conducted there would be well received. We have some doubts, however, about the success of editorial "committees." We have no recollection of any of these holding long together.

LETTER FROM CRAWFORD COUNTY, PENN.

A GENTLEMAN from Crawford county, Penn., who favors us occasionally with a pleasant and instructive letter, writes us as follows under date of April 29. We take the liberty of publishing it (omitting his name, as it was intended to be private,) on account of the items of local information it furnishes in regard to fruit and other kindred matters.

"Our season here is still very backward, and there seems to be a universal wail in the western country over the severity of the winter. No doubt a good deal of half-frozen wood will give rise to much theorizing speculation on the blight, next July and August—for the pear frequently looks well, and grows well, for a while, when amputation in the spring will disclose the wood to be discolored, and the sap vitiated, by the frost and therefore fatally diseased. I am inclined to think favorably, in pear culture, of stripping the outer bark from the tree when the tree is about to change from the smooth into the rough state. Have you ever tried it?* In this region, the wood of fruit trees matured very well last fall, and in taking a survey of my own premises, with the exception of a couple of frozen grafts, I find but little to regret. The peach trees look very well; and though the blossoms have been severely thinned out, a sufficient number are swelling into bloom for a crop, if they bear fruit. The pear trees bid fair to bloom abundantly, and I find that some raspberries (*Franconia* and *Fastolff*) which I left unprotected, except by the shade of a fence, are entirely uninjured. Strawberries I protected with some straw, and they look unusually well. I intend to try the hydropathic treatment of them this spring, as it seems to be highly commended by some cultivators who have tried it.

"I had a fine succession of peaches last fall, lasting for six weeks and ending with the *Heath Cling*, which here will only ripen imperfectly. Among those that fruited, I had the *Red Rareripe*, *Prince's Rareripe*, *Early York*, *Astor Noblesse*, *Grosse Mignonne*, *Morrison's Pound*, *Morris' White Rareripe*, *Sweetwater*, *Barrington*, *Oldmixon Free*, *White Cling*, and *Lemon Cling*. Though some of them bore larger and more showy fruit, yet the richest and highest flavored peaches I had were on a tree I got from you some years ago, labelled *Grosse Mignonne*. The tree has *small* blossoms, when, according to DOWNING, it should have *large;* but the fruit could recommend itself under any name.

"A peach introduced here from Cincinnati as the *Washington*, proves to be identical with *Morris' White*. I think very highly of this variety. I see you quote it as *medium* size; my tree bore a moderate crop, but the fruit was all *large*.

"The *Northern Spy* apple has been introduced into our market this last winter, from Chautauque, and created quite a sensation. It is certainly quite a magnificent looking fruit, and about as good as it looks. It seems to keep as well as the *Fallawater*, and, though the *average* size is somewhat less, it quite surpasses it as a dessert fruit; while its rich coloring, and fine appearance, must always make it a most popular fruit.

"After being behind the age for a long time, we have at last succeeded in forming an agricultural society in our county, which I think will be productive of much good to the farming interests. We shall probably not contend with the "black knot," and pear and potato blight, with any better success than has been done elsewhere; but it will promote a taste for agricultural and horticultural reading. From the wide field of experiment, our farmers can note what instances have been attended with fortunate results, the adoption of which will introduce something new each year into their mode of farming, and break up the drudgery of too uniform a system. A new test is in this way imparted to agricultural pursuits; while the emulation created by societies and fairs leads gradually to the adoption of a higher standard of culture.

"We have now the last of April, and the fruit trees look as though they would not be in bloom for ten days to come. Gardening is much later than usual, but I do not regret it, as I think in nine cases out of ten, things planted late, when the ground is warm, do better than those started earlier."

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* No; nor do we intend to very soon. At present we are not aware of any necessity for it here.—ED.

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AMERICAN POMOLOGICAL CONGRESS.—In compliance with a Resolution passed by the American Pomological Congress, during its session at Cincinnati in October 1850, it becomes my duty publicly to announce that the next session will be held in the city of Philadelphia, on Monday, the 13th of September, 1852. The Congress will assemble at 10 o'clock, A. M., in the Chinese Museum Building, South Ninth street, below Chestnut.

The Pomological, Horticultural, and Agricultural Societies, throughout the United States and Canada, are invited to send such number of Delegates as they may deem expedient. And the Delegates are requested to bring with them specimens of the fruits of their respective districts.

Packages and boxes of fruit for the Congress may be directed to the care of THOMAS P. JAMES, Esq., No. 212 Market street, Philadelphia, should the owners be unable to give their personal attendance.

The various State Fruit Committees will, on or before the day of meeting, transmit their several reports to A. J. DOWNING, Esq., general Chairman of the whole. The Chairman of each State Committee is authorized, where vacancies occur, to fill up the numer of his Committee to five members.

Philadelphia, *May* 1, 1852. W. D. BRINCKLE, M. D., *President*.

Horticultural Society of the Genesee Valley.—This Society held its second exhibition of the season on the 22d of May. The display was not large, but the articles presented were very fine.

Mr. John Donnellan made a fine show of lettuce, radishes, and asparagus.

Mr. Crosman—fine rhubarb and cucumbers.

Messrs. A. Frost & Co. exhibited a small collection of fine pot roses, including *La Sylphide*, (Tea,) and *Comte Bobrinski*, (Hybrid Perpetual;) several specimens of verbenas, azaleas, rhododendrons in bloom; a plant, in bloom, of the *Double White Chinese Primrose;* good specimens of Auracaria, Cryptomeria, and Deodar cedar, in pots.

Wm. Webster, with Messrs. Bissell & Hooker, six fine varieties of seedling calceolarias—a very pretty contribution.

Ellwanger & Barry made show of cut flowers of early blooming trees and shrubs, such as *Spiræa prunifolia*, *Mahonia aquifolia*, *Cerasus pudus*, or Bird Cherry, *Cotoneaster affinis*, *Pyrus Japonicas*, *Judas Tree*, magnolias *Conspicua* and *Purpurea*, &c., &c. Roses in pots—*Geant des Batailles*, and several others. Cinerarias—a fine show of seedlings, besides *Beauty of Flushing*, *Carlotti Grisi*, &c. Calceolarias—many fine seedlings. Hyacinths, early tulips, narcissus, &c.

Mr. Donnellan made a good show of pot-plants, including a fine *Cactus Jenkinsoni*, a specimen of rose *Queen of the Bourbons*, petunias *Enchantress* and *Prince of Wales*, several verbenas and pelargoniums.

Messrs. Sheppard & Cherry presented some finely preserved specimens of apples—*Baldwin*, *Northern Spy*, *Rhode Island Greening*, and *Esopus Spitzenburg*.

May 31st.—The third exhibition was held to-day. The tulip was the leading feature, although the contributions of this flower were few and small compared to what they ought to be. But two amateur cultivators exhibited—Mrs. Jno. Williams and Mrs. Jewell;—both very pretty collections. Among nurserymen Messrs. Jno. Donnellan, Wm. King, and Ellwanger & Barry, were the only exhibitors of tulips.

Messrs. Frost & Co. made a good display of roses, among which we noted *Blanche Vibert*, one of the few pure white Hybrid Perpetuals. Several varieties of verbenas, geraniums, &c.

Wm. King—a good collection of pansies, calceolarias, fuchsias, &c. Among the latter we noted very fine *Snow Drop* and *Pearl of England*.

Mr. Webster—a table filled with pot-plants, fine seedling calceolarias, and other plants.

Ellwanger & Barry exhibited cut flowers of a large collection of trees and shrubs. Five varieties of spiræas, eleven of lilacs, six of berberries; Red, White, and Yellow horse-chestnuts; Flowering ash, (*Ornus;*) Yellow azaleas; magnolias; four varieties of upright honeysuckles; the Judas Tree, (*Cercis;*) the Cotoneaster, Viburnums, &c. *Pot-Plants*—Roses, cinerarias, mimaluses, fuchsias, calceolarias, &c., &c. *Bulbous Plants*—Tulips of the various classes; five or six late varieties narcissus; several early herbaceous pæonies; tree pæony *Banksæ*, and a new distinct one *Kocklini*, purplish rose color, very double and compact, and the petals fringed.

Wild flowers were shown by L. Wetherell, Esq.—some forty species, all named. We hope to see more competitors hereafter in this department. From among so many students of botany in our schools and seminaries, so many teachers, &c., can we muster only one exhibitor. Shame!

Vegetables were exhibited in great perfection as usual by Jno. Donnellan and C. F. Crosman.

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Peach Trees.—The injury to peach trees from the severe winter has been much greater than we supposed. They blossomed nearly as well as usual, but a large portion of the blossoms fell without setting fruit; the leaves expand slowly and feebly; young shoots are weak; and in every part a debility is indicated—the consequence, no doubt, of the severe frosts. In some cases, old trees are completely killed. Our peach crop will be very light. H. P. Byram, Esq., of Louisville, writes in the June number of the *Horticultural Review:* "The larger portion of my pear and cherry blossoms are killed. Most of the varieties of apples are safe. Quince trees are nearly all killed *to the ground*, and the peach trees are badly injured."

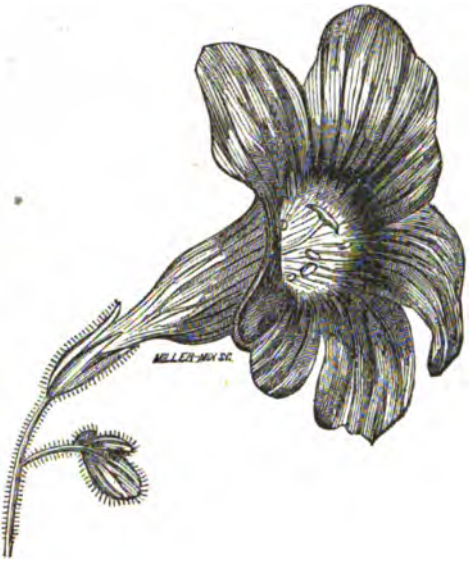
◆

Strawberries made their first appearance in Cincinnati on the 14th of May. We shall have none in Rochester till about the last week in June. More than a month of difference in the season of this fruit between Rochester and Cincinnati—a twenty-four hours' journey. An exchange might be advantageously made between the two places. The people of Buffalo have been supplied with green peas from Cincinnati a month before they can have them from their own gardens. See what railroads do.

Ladies' Department.

ANNUAL FLOWERS.

At the commencement of the present volume, we determined to give during the year figures and descriptions of the best annuals. This design we have carried out thus far, having given both engravings and descriptions in every number but one, when the matter prepared was unavoidably crowded out by the excellent article on the *Fuchsia*, by our horticultural associate. As the season progresses, and our choice annuals come into bloom, we shall have them drawn and engraved, and given a place in the *Farmer*. Those ladies who have become subscribers merely for our *Floral Department*, we are determined shall receive full value. We are occasionally asked for descriptions of flowers which we have before given in previous volumes. To these requests we may occasionally comply.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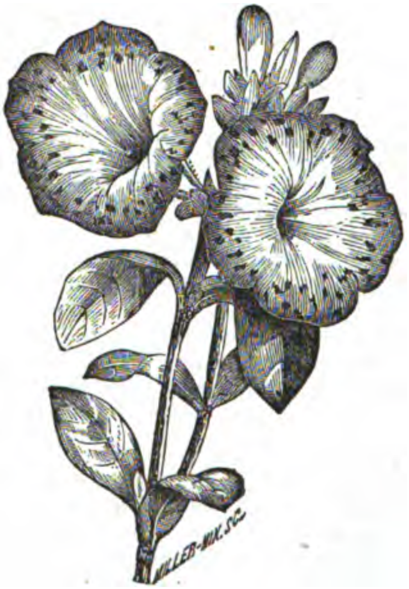
SALPIGLOSSIS.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PETUNIA PUNCTATA.

Salpiglossis.—The *Salpiglossis* is a native of Chili, and was introduced into Europe in 1824. It bears a strong resemblance to the petunia. The genus contains many varieties, and are all funnel-shaped, like the petunia, but not so broad.

Petunia.—The *Petunia* is a native of South America. It is easily propagated either by cuttings or seeds, and is a general favorite. The seeds only require scattering in any common garden soil to grow and flower freely. When grown thickly in a bed, they intermingle and form masses of great beauty, and no dry weather injures them—keeping in blossom until destroyed by frost.

The season has been so cold and backward, that we fear many of the early planted flower seeds have suffered. June 10th we had a fine lot of plants, raised in a bed for transplanting, destroyed by frost during the night. At the present time (June 18) the weather is moist and warm, and vegetation progressing rapidly.

Editor's Table.

PREMIUMS.—Below we give the award of premiums for the present year. In addition to the names here given, a great number of persons have procured large lists of subscribers, to whom we are, as formerly, much indebted. We feel great pleasure in being able to scatter useful books on agriculture over the land. As we observed, on offering these premiums, they must increase the knowledge, and consequently the power and the wealth of those for whose especial benefit we labor. We do this for the good they accomplish, as well as a slight compensation to our friends—the friends of rural improvement—throughout the country, who act as voluntary Agents, with-the expectation of pecuniary reward.

PREMIUMS TO INDIVIDUALS.

1st. WM. L. BADGLEY, Springville, Erie Co., N. Y., for the greatest number of subscribers sent by one individual, (153,) *Thirty Dollars* in agricultural books.

2d. CHARLES P. DIBBLE, Marshall, Mich., *Twenty Dollars*, for the next greatest number, (121.)

3d. JOHN SMITH, Prattsburgh, N. Y., *Ten Dollars*, for the third greatest number, (113.)

COUNTY PREMIUMS.

1st. CHAUTAUQUE COUNTY, N. Y., *Forty Dollars* in agricultural books, for the greatest number of copies of the *Genesee Farmer* taken in any county, being 490. This Library, according to the offer, is "to be kept as a County Agricultural Library, under the care of the Agricultural Society."

2d. STEUBEN COUNTY, N. Y., *Twenty-Five Dollars* in agricultural books, for the next greatest number, (473,) on the same conditions as above.

COUNTY PREMIUMS OUT OF NEW YORK.

1st. ERIE COUNTY, Pa., an Agricultural Library worth *Forty Dollars*, for the greatest number of copies of the *Farmer* taken in any county out of the State of New York, (333.)

2d. CALHOUN COUNTY, Mich., *Twenty-five Dollars* as above, for the next greatest number taken in any county out of the State of New York, (216.)

Selections of books can be made by those entitled to them, or the choice left to us. Those entitled to premiums will please order.

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MONROE COUNTY PLOWING MATCH.—The Monroe County Plowing Match took place at Brockport on the 17th ult. There were sixteen competitors, all of whom did their work in a very creditable manner. The plowing was, on the whole, the best we ever saw on any similar occasion,—and we have attended many plowing matches both in Europe and America,—and made us feel proud of Monroe county. There was a large concourse of farmers and others interested in agricultural matters present, say 1,500, who listened to an interesting address from HORACE J. THOMAS, of Brockport.

The method of plowing adopted was a much better test of the plowman's skill than the one generally practiced. Instead of throwing up a double furrow in the center of the land to be plowed, and then *turning from you* all the time till the land is finished, each plowman threw up a double furrow in the old dead furrow, as in the other case, and then turned toward him, or "hawed round," and came up the furrow of his next neighbor. This showed the skill of the plowman in raising a double furrow, and likewise, what is a much more searching test of a plowman's capabilities, *his skill in turning the last two furrows and leaving a well finished dead furrow.*

The judges were a long time in deciding on the respective merits of the plowmen, so that when they made their report, nearly all had left; and indeed such was the excellence of the plowing, that it was by no means easy to decide which was the best, and we anything but envied them the task; yet we must say that the decision accorded with our own opinion, and so far as we know, with most others who examined the lands carefully.

The following is a list of the successful competitors:

First Premium, $8, to COLES GREEN, of Clarkson. HENRY CLARK, Plowman.

Second Premium, $6, to F. P. ROOT, of Sweden. A. OOTOUDT, Plowman.

Third Premium, $4, to GEO. W. GOODHUE, of Wheatland. GEORGE ASHMAN, Plowman.

Fourth Premium, $2, to L. GILLESPIE, of Sweden.

Fifth Premium, Vol. Trans., to GEO. H. GOODHUE, of Wheatland, (under 18 years old.)

Sixth Premium, Vol. Trans. of Am. Institute, to ALLEN SLOCUM, of Clarkson.

Among the implements exhibited on the ground, and which struck us as being improvements on the old ones generally in use, were—

A Patent Wheel Cultivating Gang-Plow, invented and manufactured by HERVEY KELLAM & GEORGE VALLEAU, of Scottsville, N. Y. It is so arranged that the tongue can be placed to work equally well with three or two horses, and it is connected by iron rods with the axles of the wheels, so that when the tongue is moved round, it alters the course of the wheels without turning the body of the implement. By this ingenious contrivance the plows can be turned round without any strain on the wheels, in a very little space. The depth is regulated by the wheels, which are raised or lowered in the same manner as in Ide's Cultivator. The price is $80.

Root's Patent Cultivator, manufactured by J. Ganson & Co., Brockport, N. Y., was highly spoken of by some farmers present who had used it. It differs from Ide's Cultivator in having the side wheels placed forward and a small wheel running behind in the center of the cultivator. The principal advantage we observed in it was that the tongue could be moved up and down without affecting the cultivator, and that consequently there is no strain on the neck-yoke, as is sometimes the case with the ordinary cultivators.

We were much pleased with a remark of Mr. Goodhue, of Scottsville, two of whose sons were among the competitors, (one of whom, under 18 years of age, carried off the fifth premium, and the other one, under 14 yeass of age, likewise well deserved one,—and we understood at the time it was the intention of the committee to award him a special premium,)—"If farmers would only bring their sons to these plowing matches, and encourage them to compete, instead of letting them go to circuses and other places that deprave their taste, we should soon see a difference in the plowing of the county." We hope the hint will be acted on, and that our State and County Societies will do all they can to encourage competition among the boys, in the best method of turning over the sod.

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Letter from Liebig.—Baron Liebig has addressed a letter to the editors of the *Journal of Agriculture*, Boston, from which we extract all of general interest. The Baron is certainly modest, in thinking it "not best to oppose too obstinately the efforts of farmers to test the strength of scientific principles after their own fashion." The remarks on the state of his own country, and the "appalling" increase of emigration, is interesting to every American citizen, and none the less so to the rulers of Europe.

"I have heard a great deal of your efforts to improve agriculture in your country; and, what is of the greatest importance, to enlighten the farmers on the means, which are indispensable to attain that purpose. You will find, as I did, that agriculturists, in general, are not very grateful for it. They are men, after all; but, in regard to the teachings of science, they act like children, who cannot see the purpose and use of going to school; although whatever of good or useful they achieve in after-life is only in proportion to the sum of knowledge thus acquired.

"Farmers can fully appreciate the value of a sum of money, that may be given to them, on purpose to improve their fields; but the advantages of science, by the aid of which they could make as much, they do not estimate highly enough, because so to do requires meditation and mental labor. The services of science would be better received, if she could give every one a receipt—a ready made, right down prescription—to fertilize land, without requiring any further thought or inquiry.

"But to do that is impossible; and hereby you may know the man of solid knowledge from the mere empyric—that the experiments of the former succeed, while those of the latter are forever doubtful. Science includes the art to infer useful hints from every trial.

"The lack of a judicious understanding of the true principles of agriculture, is the reason for the many attacks which her doctrines have met with in England; but in the course of time these obstacles will be of no consequence. In a few years farmers will find that what has been substituted for science is not at all of general application; and that only a few of those who imitate Mr. Lawes or Mr Pusey, will obtain the same favorable results; because different ground requires different conditions in order to yield a maximum of product. The real advantage of science to a farmer, consists of a knowledge of those several conditions; and he is a spendthrift, if he applies the same thing to every kind of land.

"In the whole of Wurtemberg (the soil of which consists principally of Jena limestone) carbonated bones have not the least effect; and even guano is held in no estimation there, for the reason it renders the grain weed-like: and by giving no strength at all to the stalks, makes it bend to the ground long before ripe. To conclude, therefrom, that carbonated bones and guano are bad manure, would certainly be quite absurd.

"I think it advantageous not to oppose too obstinately the efforts of farmers to test the strength of scientific principles after their own fashion. It always affords me pleasure to find my views violently attacked, and if he who does so, brings forth a complete mass of ignorance and nonsense. The consequence is, necessarily, that their own children, more enlightened than their sires, will repulse the attack.

"I would like once to see your happy country, where the well-earned fruits of activity and industry are enjoyed without let or hindrance. With us, too, much is consumed by the institutions of the States. The people must work too much to sustain standing armies of men fully able to work yet producing nothing. This is the case of Europe. Emigration increases to an appalling degree, and now the intelligent and wealthy begin to leave the land of their fathers, because they know their children will enjoy a happier future in America.

Farewell, dear Sir, * * * *

Most respectfully, Justus Liebig."

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Giving Credit.—Although none have suffered more by the pilfering propensities of their contemporaries, none have complained less. Should we open a mail without finding some of our articles taken bodily, without a word of acknowledgement, or, what is worse, credited to some paper that had before pilfred it from our pages, we should note it down for future reference, that "now, about this time," there was a great improvement in the morals of the press. On this subject, the Boston *Journal of Agriculture* says:

"Our course was laid down at the commencement of our career. We cut off the exchange with any paper that, three times in one volume, appropriates our articles without credit. The consciences of such can always answer, if interrogated, why they no longer see the *Journal of Agriculture*."

We fear if we were to adopt this rule, we should have to part with about one-half of our exchanges. We shall certainly apply it to some of the most incorrigible. All the articles in the *Farmer* are original, unless full credit is given.

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We invite attention to the advertisement of a "Fruit Farm in Ohio for sale." Mr. Bateman informs us that the price is $40 per acre, in three annual payments, with a reduction for cash.

Preserve your Numbers.—Kind reader, we are furnishing you a paper each month that is well worth preserving. Set a few stitches through the back, cut the leaves, and then you are ready to read a number comfortably. As soon as all have read it, lay it aside carefully for binding at the end of the year. If you don't live within a hundred miles of a book-bindery, stitch them together. Do this, and we modestly think that you will have a book at the end of the year, that no sane man would sell for a dollar.

The Trial of Implements by the N. Y. State Agricultural Society, will take place near Geneva during harvest. The day is not yet determined, but will be published in season, in the local papers. Grain Reapers, Mowing Machines, Seed Drills, &c., are then to be tested. A mechanical exhibition is to take place at the same time, in Geneva, under the direction of its citizens. It will be an interesting exhibition.

Poultry Exhibition in Rochester.—The Monroe County Agricultural Society have determined to hold a Poultry Exhibition in connection with the next County Fair, (Sept. 29th and 30th,) to be open to the State. The premium list is liberal, and we anticipate a fine display.

The Musical World and Journal of the Fine Arts.—We have received this Journal for the last two or three months, and recommend it to all who would keep pace with the times in respect to musical intelligence. Terms, $1.50 per annum, in advance. Published on the 1st and 15th of each month, by Oliver Dyer, No. 257 Broadway, New York.

Saxton's Rural Hand-Books.—C. M. Saxton, of New York, is publishing a series of small books, at 25 cents each, after the style of a series published in Dublin. We shall notice these and other books in our next.

Plantation and Farm Instruction, Regulation, Record, Inventory, and Account Book: By a Southern Planter. Published by J. W. Randolph, Richmond, Va.

The above book was handed us by our friend Erastus Darrow, Bookseller, Rochester, N. Y.

Advertisements, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance.*

Exchange Papers have laid us under many obligations for their friendly notices.

Agricultural Fairs.—Below we publish all the agricultural Fairs to be held this fall that have come to our knowledge. The officers of any that have been omitted will please notify us, giving time and place. Those sending notices in papers, will please mark them, or they may escape our notice.

STATE FAIRS.

New York, at Utica,	Sept.	7, 8, 9, 10
Ohio, at Cleveland,	"	15, 16, 17
Michigan, at Detroit,	"	22, 23, 24
Canada West, at Toronto,	"	21, 22, 23, 24
Vermont, at Rutland,	"	1, 2, 3
Pennsylvania	Oct.	20, 21, 22
Wisconsin, at Milwaukie,	"	6, 7, 8
Georgia,	"	18 to 23
Maryland, at Baltimore,	"	26, 27, 28, 29
American Pomological Congress, at Philadelphia,	"	13
American Institute, at New York,	"	5
" Exhib. of Stock,	"	19, 20, 21
Rhode Island Society of Improvement, at Providence,	Sept.	15, 16, 17
New England Society for Improvement of Poultry, at Boston,	"	7, 8, 9, 10

COUNTY FAIRS.

Saratoga, at Mechanicsville,	Sept.	15, 16, 17
Rensselaer, at Troy,	"	22, 23, 24
Clinton, at Keeseville,	"	22, 23, 24
Essex,	"	20, 21, 22
Suffolk, at Huntingdon,	"	22
Otsego, at Morris,	"	22, 23
Jefferson, at Watertown,	"	16, 17
Cortland,	"	15, 16
Herkimer, at Herkimer,	"	28, 29
Ontario, at Canandaigua,	"	29, 30
Monroe, at Rochester,	"	29, 30
Wyoming, at Warsaw,	"	22, 23
Seneca, at Waterloo,	Oct.	14, 15
Genesee,	"	6, 7
Cayuga, at Auburn,	"	6, 7
Putnam, at Carmel,	"	5, 6

TOWN FAIRS.

East Bloomfield,	Sept.	22
Galen, at Clyde,	July	3, 4

Inquiries and Answers.

Scab, and Grub in the Head of Sheep.—Is the Scab of Sheep contagious? Is it confined to the skin? and what is the best remedy? Also, for the Grub in the head? An answer would oblige myself, and many other of your subscribers in this section. A. C.—*Waconda, Ill.*

The scab in sheep is caused by a parasitical insect, the *acari*, and is exceedingly contagious, so much so, indeed, that it seldom makes its appearance in a flock without affecting the whole. The cause of contamination, however, is not so much from a sound sheep coming in direct contact with a diseased one, as by rubbing themselves on the same posts, &c. As soon as it is discovered, all the affected sheep should be immediately removed from the flock, and the sound ones turned into fresh pastures or folds, where they should be well watched, and any that may show symptoms of the disease be instantly taken away.

The best and surest remedy, if applied with care, is the common unguentum diluted with five times its weight of lard. Rub a little on the sheep, and then open a furrow along the back and with the finger apply a little and rub it well in;

then open another furrow on each side of the sheep and apply as before, rubbing it well in. Half an ounce is an ordinary dressing, but if the case is an aggravated one, 1½ oz. may be used. It is usually the worst about the shoulders. A strong decoction of tobacco, with the addition of a little spirits of turpentine, is recommended by some, but we have never used it, though it will probably be found efficacious. The unguentum is a certain cure, and if used with ordinary care is perfectly innoxious.

The worm in the head is caused by a fly of a light drab color, which deposits its eggs in the nostrils of the sheep, from July till late in the fall. When the worms are hatched they begin to ascend the nostrils in search of food and soon enter the head, where they feed on the vitals, when death soon ensues, often very suddenly, though sheep sometimes live several months after they have exhibited symptoms of being attacked, but they grow very poor and have a sickly appearance, often snorting as if working to throw something from their head. It is said that fat sheep are often attacked without being injured—the worm finding plenty of food in the nostrils, does not ascend to the head and therefore does little injury.

Preventives.—Smear tar on the nostrils of the sheep several times during the summer months; or, what is much easier, though perhaps not quite so effective, is to place tar beneath the salt in the trough in which the sheep are salted. In licking the salt the sheep will smear their nostrils with the tar, which will prevent the fly from depositing its eggs, and any little tar they may eat will do no harm but rather good.

There are a great many *remedies* recommended for this disease. Snuff, blown forcibly into the nostrils with a quill, is very effective; but it is a slow and disagreeable process. Tobacco smoke blown up the nostrils by placing the stem of the pipe high up in them, and blowing by some means through the bowl, thus forcing the smoke into the cavaties of the head. A tea-spoonful of spirits of turpentine and olive oil, in equal proportions, poured up each nostril, is said to be good. We like the following remedy the best: Take 4 oz. of Scotch snuff and pour over it a quart of boiling water; stir it well, and when cold take a syringe and inject about a table-spoonful up each nostril. The sheep should be placed on its back, and with the head on the ground. Force the mixture as much as possible into the cavities of the head, keeping the point of the syringe inclined upwards for this purpose, or the liquid will be apt to fall into the throat. It will make the sheep very drunk, but nothing need be apprehended, even though they appear in the agonies of death, as they speedily recover.

The operation should be repeated in a week or ten days, so that if there are any of the worms in cavities where they escaped the dressing, they will probably in that time have changed their positions and the second dose will be likely to remove them.

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Mixing Ashes with Manure.—Please inform me whether the incorporating of unlixivated house ashes with stable manure, in a cellar under a barn,—in which barn horses and cattle are kept winter and summer,—the cellar being perfectly protected from rain or spring water, also from the sun,—would be beneficial or detrimental to the value of the manure if gradually mixed as the ordinary fires of a farm-house would produce them? Would, or would not, the *alkali* set free the *ammonia?* Charles Booth.—*Elizabethtown, C. W.*

Unleached wood ashes will in all cases decompose salts of ammonia where there is sufficient moisture present, and liberate the ammonia, which escapes into the atmosphere and is lost. So that when ashes or lime are mixed with fresh liquid or solid excrements, the lactate, urate, phosphate, and muriate of ammonia, which it contains will be immediately decomposed and easily detected by the strong, pungent, well known smell of hartshorn. Mix a pint of fresh lye with some unleached ashes and see if it is not so. The reason of this action is, that the alkalies (potash, soda, &c.,) of the ashes, have a stronger attraction for the acids with which the ammonia is united, than the ammonia has; so that the take away these acids and the ammonia is left free, and being much lighter than air it flies off unless stopped by some absorbent substance.

◆

Corn ground with the Cobs for Food.—Corn is used extensively in this country, in feeding to stock, crushed and ground in the cob. I have had my doubts of there being much nutriment in the cob after the corn becomes dry, and think cut straw much better to mix with the clean meal. I would be pleased to have your views on the subject, or some of your able correspondents. Sam'l [illegible]—*Pulaski, Pa.*

We have always had our doubts of the economy of grinding the cobs with the corn, for feeding stock. *There is little or no nourishment in the cobs,* and the millers generally charge as much for grinding a bushel of corn in the ear as they do for a bushel of shelled corn, so that instead of the grinding costing only a tenth, it amounts to one-fifth of the corn ground. We think, with our correspondent, that it would be better to shell the corn and then mix meal with cut hay, corn-stalks, or straw—it costing less to remove the cobs than to grind them. It would be of great advantage to most farmers to have a crushing mill of their own, to be worked by hand or horse power, and then they could crush oats, corn, and every thing they feed to horses or cattle, for a mere trifle, and would find the advantage of such a course.

Leicester and South Down Sheep.—As your paper seems to be a sort of medium for farmers to obtain information through, I wish to inquire which are the most profitable sheep to raise, for the double purpose of wool and mutton —the Leicester or South Downs? Wool is worth about as much here as in Western New York, and mutton about three cents per pound. The general grade of sheep here is native, mixed with Merino, Paular, &c. There are very few Leicesters and South Downs. I have a few Leicesters. The question here is, whether they are long lived, healthy, fatten easy. and what their relative value is over other breeds of sheep? If you would give the desired information, I should feel much gratified. C. M. Dewey.—*Cambridge, Mich.*

There are as many different opinions on this question as there are different breeds of sheep. The Leicester grow larger, the wool is longer, and they are supposed to fatten quicker than the South Down. But the wool and mutton of the South Down is of a superior quality to the Leicester; and South Downs stand cold wet weather better than the Leicesters. If mutton is worth only three cents per pound, we are not sure but the fine wooled would be the most profitable breed.

◆

Plowing in Oats as a Manure for Wheat.—I have sown a field in oats which I intend turning in just before they head out, and when sufficiently rotted I wish to plow again and sow in wheat. Will you, or some of your correspondents, inform me through your columns whether such a course will be likely to pay the expense of the seed oats and two extra plowings that it will necessarily require. B. A. Overmon.—*Salem, Ind.*

None of the cereal grain crops, such as oats, corn, rye, timothy, or buckwheat, should ever be sown for the purpose of plowing in as a manure for a wheat crop, inasmuch as they are supposed to extract from the soil more nitrogen than they contain when plowed under; and as the wheat crop specially requires nitrogen, such a course should never be adopted. Unless the soil is light and sandy, a summer fallow would do more good, cleaning the land in the bargain. Peas and clover plowed in when in bloom, are the best green crops to grow as a manure for wheat. [See "plowing in green crops," in the June number.]

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(B. M. Connell, *Howard, Steuben Co., N. Y.*) Canada thistles are a troublesome weed, not only in your neighborhood, but in nearly all others. We know of no easy and effectual mode of exterminating them from a farm. They should never be allowed to go to seed; be careful to mow them round the fences, roads, and on any waste land. Cut your clover before any thistles in it have formed seed; mow all in your grass land and summer fallows; and be sure to let this be done early enough, for if the seed is formed at all it will grow as it matures, after it is cut. The only way to destroy it in such a case, is to burn the thistles.— In this way much may be done to remove Canada thistles from the country.

(Out West, *Hartford, Wis.*) Should think there was no deficiency of lime in that description of soil, but if you get unleached ashes for the drawing only a few rods, it will doubtless pay you well to use them. They do as much good on wheat as other crops. The older they are and the more exposed to the atmosphere they have been, the better, as they are the more likely to have absorbed ammonia in the place of the removed potash and soda.

◆

Coal Tar.—I notice an inquiry in the April number of the *Genesee Farmer*, by Mr. Kent, on the subject of applying coal tar to house roofs, and I think your explanations are not definite enough, so I propose to give my personal experience in the matter, and if you think proper you may publish it.

On one part of my house I have had the third roof put on, with the assurance from each of the mechanics that the roof would not leak; but they all proved failures. I then saw an account in the *Ohio Cultivator* of the use of coal tar for stopping leaky roofs, and from the directions I received in that, I commenced applying the tar—first boiling the tar merely for the purpose of putting it on hot, as I understood the directions. The consequence was, that the tar ran through the crevices like boiling oil, and also through the cracks in the plastering, injuring every article of household furniture which it touched. What did remain on the top of the shingles was constantly melting by the sun and running through the cracks.

Now this is the method which I pursued: I boil the tar until ebulition almost ceases (being very careful about letting it take fire, which it does as readily as boiling oil); I then procure a strong handled corn broom and cut off the end of the brush about one-half, making a very stiff brush, and then apply the tar boiling hot; the second coating apply a thick covering of clean sand, after which apply another coating of tar, each time boiling hot. I will warrant a roof that will last as long as the owner of the house, and perfectly water tight. It is necessary to let each coat of tar precede the other a week or ten days. Reuben N. Wood.—*Chippewa, Ohio.*

◆

Ashes on Potatoes.—Potato Fly.—I desire some information in relation to what, in this country, is called the "Potato Fly," "Shaver Bug," &c.—the best manner to combat them, or to *prevent* their ravages.

I would just say to your correspondent, E. Hammond, that my experience and observations, in relation to the application of leached ashes to potatoes, are quite the reverse of his. I never have had a rotten tuber where ashes were applied while planting. I drop the potato, then apply ashes; and finally cover with loose earth. I do not consider ashes a preventive. I hope others will give us their experience. J. W. J.—*Lawrence Co., Ind.*

◆

Ground Moles.—We are very much troubled with a Mole, commonly called Ground Mole, in this section. If you, or any of your numerous subscribers, can inform me of any practicable method of catching or destroying them, I shall feel under renewed obligations to the *Genesee Farmer*. Nicholas Haight.—*Bedford Station, N. Y.*

◆

New Oxfordshire Sheep.—Can you, in your replies to correspondents, inform me where the New Oxfordshire sheep can be found, and the probable price of a pair of lambs or yearlings—say a buck and ewe. Sam S. Beman.—*Hampton, Wash. Co., N. Y.*

HORTICULTURAL.

(S. S. R., Harrison.) ROOT GRAFTING—Is usually performed on young roots about one-quarter of an inch in diameter at the collar where the graft is inserted. The common mode, is whip or tongue-grafting—a sloping cut about an inch long is made on both root and scion; both are tongued alike and fitted one into the other so that their surfaces are in close and even contact, and their bark at least on one side fitted together. A bandage of some slight material, tow, waxed paper, &c., is applied to keep the graft in its place, and the work is done.

BUDDING—is performed during the growing season, and when the buds on the current year's shoots are perfectly formed and mature. The bark on the stock is raised and a bud from the scion or shoot of the same season is taken off, with half an inch of bark above and below attached, and inserted. A bandage of some elastic material, bark, woolen yarn, &c., is applied. This is but a rough outline of the proceeing. You ought to procure some of the various treatises on tree culture. Apple, pear, peach, or plum scions, cannot be planted so as to grow; but the small fruits, grapes currants, gooseberries, &c., can.

(LUKE PUNSHON.) Ivy plants can be obtained at any of the principal nurseries where ornamental plants are sold.

(S. T. R., Marion, Wis.) We have seen cherry trees saved, which have been split by hard frosts, as you describe yours to have been, by being wrapped up in a straw covering until the wound healed up during the following summer. The course you have taken will no doubt save yours if you do not uncover them too soon.

(P. M., Cedarville.) Scions from a sweet apple tree will produce sweet fruit, even if grafted on a sour apple stock. The stock has no such influence on the scion as to change it from sweet to sour, or from sour to sweet, though it does produce certain modifications, in both wood and fruit, in the same way as certain soils do. A bud or graft from any particular variety never loses its identity, no matter on what grafted or budded, no more than a plum would become a peach when budded on peach stock, or a pear become a quince when on a quince stock.

Budding can be performed any time from July to September. Get some of the various treatises on tree culture. It is all a fable about producing a sweet and sour apple by inserting a sweet and sour apple bud together.

(A. J. H., New Fane.) The insect is the "Apple Worm." It enters at the blossoms and eats to the core. The most effectual and simple remedy is to pick up and destroy the wormy fruit as fast as it falls. If swine are allowed to run in orchards, they will do this.

(L. B., Out West.) BIRDS.—We concur in the opinion that troublesome as birds are in some cases, they are yet a blessing in destroying myriads of destructive and annoying insects. Powder and shot may be occasionally resorted to for the purpose of saving a crop of fruit, especially in woody districts where birds are very numerous and fruit very scarce.

PARADISE STOCKS, for dwarfing apples, are usually sold in the nurseries at $2 or $3 per 100. All the best varieties we have so far tried, succeed well on it. The *Red Astracan*, *Gravenstein*, *Canada Reinette*, *Fall Pippin*, *Keswick Codlin*, *Summer Rose*, are choice sorts that do remarkably well. In dwarfing, the bud or graft should always be inserted *near* the ground, for the reason that it usually outgrows the stock.

(J. H. C., Darien, Ct.) Thorn seedlings are generally to be had in the nurseries. We have not much experience in working the pear upon them, but have succeded well with *Buffam*, *Seckel*, *Marie Louise*, &c., on the American species. The quince is better. *White Doyenne*, *Louise Bonne de Jersey*, *Duchess d'Angouleme*, *Bartlett*, *Belle Lucrative*, *Vicar of Winkfield*, and *Glout Morceau*, are among those that succeed remarkably well. Budding is better than grafting.

(A. D. SOUTHWICK, Junius.) Fine samples of *Red Canada*, or old *Nonsuch*.

(T. J. M., Bayfield, C. W.) The wild cherry is not suitable for a stock, especially for the *Heart* and *Biggereau* varieties. The sour, or *pie* cherry, is better, but neither buds or grafts take well upon it. *Mazzards* can be had cheap in the nureries.

(W. G., Phœnix, Pa.) We cannot account for the bark becoming loose on your plum trees, and the wood of the body being dead while the head is living and in blossom. We have not seen such a case. It may be the bark was split open by the severe frosts and thus the body killed. This would not prevent the top from showing leaves and blossoms.

(H. B. S., Rockport.) EVERGREENS.—You can get young plants of native species from the woods in the months of May and June. Seeds of all hardy kinds may be sown in June, in a cool shaded north border, or in boxes of earth in such situations. The seeds are sown as you would carrots, beets, or any common garden seeds, in fine earth and slightly covered.

(J. C. T., "A Subscriber in the Black Swamp.") Strawberry plants can be sent from here a week's journey, or more, in July or August, or beginning of September. Cherry grafts can be had, in the season, at two to three shillings per dozen, at the nurseries. Roses are grafted at the same times and under the same conditions as other trees and shrubs. Grape Vines should be grafted as the stock begins to grow; scions to have been kept dormant. The wild flower was not received.

(J. L. E., Mexico.) Peach stones should be kept moist from the time they are taken from the fruit, and in winter mixed with earth and spread in thin layers to thaw and freeze. Thus treated, most of them will grow in the spring. If they have been kept dry, it may be necessary to crack them.

New York State Agricultural Society.

DURING the past week, a trial of some interest, growing out of the Fair held here last fall, took place in this city. It appears that it is the duty of the general Secretary of the Society to take charge of the necessary arrangements for holding the Fair, and this has been done heretofore by B. P. Johnson, Esq. In May, 1851, Mr. Johnson was appointed by Gov. Hunt to represent the State of New York at the World's Fair in London. During the absence of Mr. Johnson, the Executive Board, at their meeting in Rochester in June, in its necessity, appointed James P. Fogg of this city, Acting Secretary. He performed the laborious duties of the General Secretary, for which they voted him unanimously the following award and thanks:

"The Executive Committee met in the rooms in Corinthian Hall, on Friday evening, Sept. 19th, and the following resolution was adopted:

"On motion of L. F. Allen, Esq., of Buffalo,

"Resolved, That the thanks of the Society be presented to Mr. J. P. Fogg, for his valuable services rendered to the Society as local Secretary, and that a piece of plate, of the value of one hundred dollars, be presented him, with a suitable inscription, to be prepared by the President."

Strange as it may appear, the plate mentioned in the resolution was never offered to Mr. Fogg, nor any reason given by the officers, when applied to, for the refusal. It is proper to state, that this refusal does not attach to the Society, or even a majority of the Executive Board, but is the act of a few members of the Board, residing chiefly at Albany, who assumed the responsibility thus to repudiate, without the least shadow of authority, the unanimous resolution of the Executive Board.

Not quite satisfied with this novel method of cancelling obligations, an action was commenced in December, and referred by agreement to Orlando Hastings, Esq. Several members of the Executive Board for the past and present year, were in attendance and zealously defended the suit, principally on the ground that the services rendered by Mr. Fogg were regarded as honorary merely; that the Society was not bound legally to pay Mr. F. anything, or to carry out the resolution of the Executive Board. The salary of Mr. Johnson, the General Secretary, is $1500. The referee gave a written decision in favor of Mr. Fogg for $190.

Rochester, May, 1852. J. P. F.

The Saturday Evening Post.

THE CURSE OF CLIFTON: A TALE OF EXPIATION AND REDEMPTION.

BY MRS. E. D. E. N. SOUTHWORTH,

Author of the "Deserted Wife," "Shannondale," "The Discarded Daughter," &c.

SUCH is the title of a new novelette about being commenced in the Saturday Evening Post, of Philadelphia, by that gifted writer, Mrs. SOUTHWORTH.

Single subscriptions, $2 a year; 4 copies, $5; 9 copies, $10; 21 copies, $20. Specimen copies sent gratis. Address, post paid,

DEACON & PETERSON,
No. 66 South Third St., Philadelphia.
[7-1t.]

EMERY & COMPANY'S

RETAIL PRICE LIST of Horse Powers, Threshers, Separators, Saw Mills, Feed Mills, Fanning Mills, &c., &c., manufactured by themselves, and delivered on board any conveyances at Albany, N. Y., or at any place in the United States, by the addition of freight:

Emery's Patent Changable Power, Thresher, Separator, and Bands complete, for 2 Horses,	$150
" " " 1 Horse,	120
Emery's Improved Wide Rack & Pinion, with Thresher, Separator, and Bands, for 2 Horses,	120
" " " " 1 Horse,	95
Common or Wheeler Rack & Pinion Power, Thresher, Separator, and Bands, for 2 Horses,	135
" " " 1 Horse,	110

If sold separately, the following prices are charged:

Emery's Changeable R. R. Horse Power, for 2 Horses,	110
" " " " 1 Horse,	80
Emery's Wide Rack and Pinion Power, for 2 Horses,	90
" " " " 1 Horse,	60
Common or Wheeler Rack & Pinion Power, 2 Horses,	95
" " " " 1 Horse,	75
Thresher with cylinder 26 inches long, 14½ in diameter, together with Separator and Fixtures,	35
Fanning Mills with pulleys for Band, $26, 28,	30
Portable Circular Saw Mill, 24 inch saw filed and sett, for sawing railroad wood, slitting fencing, &c.,	35
Upright or Felloe Saw for Wheelrights,	40
Churning attachment for driving one or two churns at a time of barrel size, except churns,	12
Sett Bands, Wrenches, Oil Can, and Extras,	5
Cross Cut Saw arrangements for butting and cutting off logs, including saw, guides and connections for use,	12
Feed Mill, cast iron plates,	35
French Burr Stone Mill for Grinding, 18 inch diameter,	100
" " " " 20 "	125
Power Corn Sheller, for 1 or 2 Horses,	35 to 50

TERMS—Cash, or approved notes or acceptancies with interest, payable within four months in Albany, New York, Boston, Philadelphia, or Baltimore, as may best suit the purchaser.

All articles warranted made of good materials, and to operate as represented, or may be returned within three months at the expense of manufacturers for home transportation, and purchase money refunded—the purchaser being his own judge in each case. For further particulars, see previous advertisements, or address the subscribers. Liberal deduction to dealers. Local Agents wanted to sell and put the above in operation.

EMERY & CO.,
June, 1852. 369 & 371 Broadway, Albany, N. Y.

Hallock's Agricultural Warehouse,

No. 50. STATE ST., ROCHESTER, N. Y.

THE Subscriber, late from the Agricultural Works, Warehouse, and Seed Store of Messrs. Emery & Co., Albany, (where he has been engaged for the past six years,) has been induced to establish an Agency for the sale of their justly celebrated Premium Horse Powers, Threshers, Separators, &c., in Rochester. Particular attention will be paid to selling and putting up the Horse Powers, and other fixtures for threshing, &c. A thorough knowledge of these machines enables him to put them up more satisfactorily than has been done heretofore. Price and terms same as at Albany, transportation added.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in Rochester, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public.

E. D. HALLOCK.
July, 1852.

GREAT SALE OF BLOOD CATTLE.

ON Wednesday, the 18th of August next, I will sell the chief part of my large herd of Blood Cattle—chiefly cows, heifers, and heifer and bull calves—comprising upwards of fifty full-bred Short-Horns.

Also, eight thorough-bred Herefords—a two years old bull, a yearling bull, three cows, and three calves. One of the Hereford cows ("Rarity") was imported from England by Messrs. Corning & Sotham, in 1841. The others, excepting the two years old bull, are her descendents, by bulls of the same stock.

Also, two or three Devon bull calves, got by Mr. Ambrose Stevens' imported bull "Candy," bred by the distinguished Mr. Quarity, of Devonshire, England, and out of cows descended from the herd of the late Earl of Leicester.

The remainder of the cows and calves, forty to fifty in number, are high-bred Short-Horn grades, with a dash of Devon blood in some of them.

The calves of the thorough-bred Short-Horns and grade cows, are mostly got by the imported Short-Horn bull "Duke of Exeter," (10,152,) of the celebrated "Princess tribe," bred by Mr. John Stephenson, of Durham, England, whose herd is excelled by none, if equalled, by any now in England.

All the Short-Horn and grade cows and heifers which come in season, will be bulled, previous to the sale, by "Duke of Exeter."

Many of the cows, both thorough-bred and grade, are descended from the Bates bulls "Duke of Wellington," imported by George Vail, Esq., of Troy, N. Y.; and by "Symmetry," son of "Wellington," out of Mr. Vail's imported Bates cow "Duchess."

This stock has been bred with a strict regard to their milking quality, in which they have been fully *proved*, and are not excelled by any herd of cows in the United States. They are all gentle, with fine silky udders, milk easy, and are animals that will be satisfactory to any one in want of the best breeding and milking stock.

The sale will take place at the residence of Peter Gurbrane, two miles above Albany, on the Troy road, on the homestead farm of Gen. Van Rensselaer, where the cattle will be for a week before the sale.

Catalogues with pedigrees will be prepared by the 15th of June, and sent by mail to all post-paid applicants.

I will also sell at the same time, two pairs of six years old thorough-bred Short-Horn oxen, and two or three pairs of matched steers.

Also, ten or twelve South-Down buck lambs, got by an imported ram, from the unrivalled flock of Jonas Webb, of Babraham, England, and from Ewes descended from the flocks of Mr. Webb, and Mr. Ellman of Sussex.

LEWIS F. ALLEN.

Black Rock, N. Y., May, 1852.—6-3t*

Fruit Farm in Ohio for Sale.

"POMONA FARM"—120 acres of excellent land; 50 acres young orchard, containing 3000 peach and 2000 apple trees of the choicest market varieties, commencing to bear, and partly enclosed with Osage Orange hedge. About 40 acres is woods pasture with living water. The soil is strong loam, well adapted for grain and grass, as well as fruit—was especially designed for fruit, stock, and poultry—about 100 improved fowls are on the premises. The buildings are of little value. The situation is very healthy and pleasant; good water; schools and other social advantages convenient.

The farm is situated at the thriving village of West Jefferson, 14 miles west of Columbus, at the intersection of the "National Road," the "Xenia Turnpike," and the "Cleveland, Columbus, & Cincinnati Railroad"—only 100 rods from the village and depot—thus affording excellent facilities for travel and transportation, with certain markets for products. It will be sold at a bargain.

Address M. B. BATEHAM,
Editor Ohio Cultivator, Columbus, O.

June 1, 1852.—6-2t*

Improved Stock.

CATTLE of the Durham, Devon, Hereford, Alderney, and Ayrshire breeds.

SHEEP of the Native and French Merino, Saxony, South Down, and Cotswold.

PIGS of the Lincoln, Suffolk, and Berkshire breeds.

From our long experience as breeders and dealers in the above kinds of stock, and our excellent situation for purchasing and shipping, we think we can do as good justice to orders, as any other house in the United States.

A. B. ALLEN & CO.,
April 1, 1852—tf. 189 and 191 Water st., New York.

New York Agricultural Warehouse,

189 & 191 *Water Street, New York.*

A. B. ALLEN & CO.

HORSE POWERS, Threshers, and Separators. The Endless Chain or Railway Powers of our own manufacture, both single and double geared, for one and two horses, which has never been equalled for lightness in running, strength, durability, and economy. They are universally approved wherever they have been tried.

2d. The Bogardus Power, for one to four horses. These are compact and wholly of iron, and adapted to all kinds of work.

3d. Eddy's Circular Wrought-Iron large Cog Wheels, for one to six horses. A new and favorite power.

4th. Trimble's Iron-sweep Power, for one to four horses.

THRESHERS—Improved Threshers made upon the best principles, threshing clean with great rapidity.

FAN MILLS for Wheat, Rye, Oats, &c., of the best construction.

RICE FAN MILLS made expressly for the South.

MILK PANS—Glass and Enamelled Iron Milk Pans, very desirable articles.

CHURNS—Thermometer, Atmospheric, Kendall's, and other kinds.

HAND CULTIVATORS and Hand Plows—are very useful implements in garden culture.

SCYTHES—Grass, Grain, Bush, and Lawn Scythes of the best kinds.

RAKES—A large assortment Steel, Iron, and Wooden-headed Garden Rakes, and Lawn and Hay Rakes.

HORSE HAY RAKES of new and highly improved patterns.

REAPING AND MOWING MACHINES—These have been fully tested, and embrace many late improvements, and we can highly recommend them.

GARDEN AND FIRE ENGINES, very useful machines, arranged on wheels, for watering gardens or walks, and affording protection from fire. They will throw a strong stream forty feet high, are easily worked, and not liable to get out of order. Also, small Garden Pumps and Syringes of various styles.

HAY AND COTTON PRESSES—Bullock's Progressive Power Presses, combining improvements which make them by far the best in use.

WATER RAMS, Suction, Force, and Endless-Chain Pumps; Leather, Gutta-Percha, India-Rubber Hose, Lead Pipe, &c.

CABBAGE PLOW—Very light and convenient for working among cabbages.

POTATO PLOW, with double mould and other forms for hilling and weeding.

Our Implements occupy three large stores, and we believe they make up the largest and most complete assortment in America. In addition, we have a machine shop, employing upwards of one hundred men, where any articles in our line can be made to order.

A. B. ALLEN & CO.,
June, 1851.—6-tf. 189 and 191 Water St., New York.

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no further preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

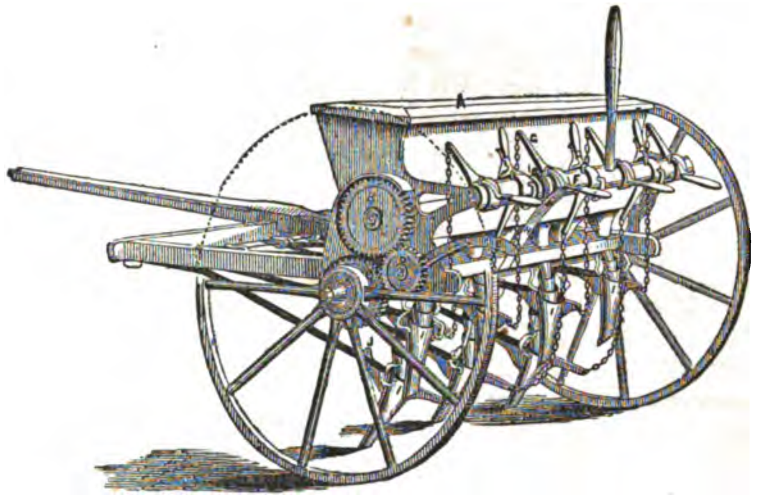
July, 1852, M. F. REYNOLDS.

Improved Subsoil Plows.

THE subscribers offer for sale an Improved Subsoil Plow, made under the advisement of Prof. J. J. Mapes, and free from the objections urged against those formerly in use. The wearing parts are so arranged that they may be easily and cheaply renewed, while the amount of force requisite to move them is less than half that required by those previously made.

Price—One Horse Plow, $5; with draft rod, $6. No. 1, with draft rods, $8.50. No. 2, do., $11.

LONGETT & GRIFFING,
June, 1852.—6-3t. No. 25 Cliff street, New York.



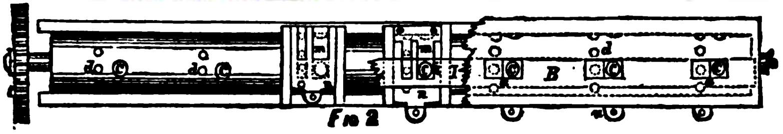


Fig 2

SUPERIOR GRAIN DRILL.

MANUFACTURED BY

Bickford & Huffman, Macedon, Wayne Co. N. Y.

THE above celebrated Machine has, during the past year, been more extensively introduced than any year previous, and what is most gratifying to the manufacturers, they have given most unqualified satisfaction. Double the usual quantity has been sold during the past year, mostly of nine tubes, without supplying the demand for them.

After several years experience, with our present increased facilities for their manufacture, together with some additional improvements in their construction, they are now offered to the public with increased confidence in their superiority over all other Grain Drills now in use. The grain is distributed by the means of a cylinder operated by different sized geer wheels for the purpose of distributing the quantity desired. We are manufacturing them with the drill tubes differently arranged, some with two parallel rows, the front row being seven inches forward of the back row, sowing the rows seven inches apart, thereby facilitating the passage of the drill tubes among stones and clods. Others are arranged in one row, eight inches apart; or we will manufacture them to order with the tubes arranged any distance apart required. Those ordering drills will please be particular and mention the kind they prefer. Of the great number sold, not *one* has been returned, although each is warranted to sow all kinds of grain with accuracy and satisfactory to the purchaser, and to be made in a workmanlike manner. Subject to this warrant, we respectfully solicit the patronage of the public, with a full conviction that they will be fully satisfied, on a fair trial, of the merits of this useful implement.

Orders for drills should be sent in early, directed to us, or to

DANIEL SUPPLE, Dundee, N. Y.;
ALFRED HALE, Alloway, N. Y.;
H. W. LEVANWAY, Lock Berlin, N. Y.;
C. L. MARSHALL, Sparta, N. Y.;
AMOS WILLITS, Aurora, N. Y.;
JOHN KING, Genoa, N. Y.;
JOHN C. HALL, Hornersville, N. Y.;
McLALLEN & HESLER, Trumansburg, N. Y.;
Col. J. M. SHERWOOD, Auburn, N. Y.;
WATERMAN & JACKSON, Vienna, N. Y.;
JAMES H. GLASS, Geneseo, N. Y.;
DAVID VER VALIN, Poughkeepsie, N. Y.;
J. H. BUTTERFIELD, Utica, Mich.;
B. B. DEXTER, Batavia, Ill.;
ABNER WING, Geneva, Wis.

Price of Drills—$65 for seven tube Drills; $75 for nine tube Drills, delivered at the Canal or Railroad.

All orders thankfully received and promptly attended to.

BICKFORD & HUFFMAN.

Macedon, N. Y., July, 1852.

TRIAL OF IMPLEMENTS

By the New York State Agricultural Society,

JULY 1852, AT THE VILLAGE OF GENEVA.

THE trial of Grain Reapers, Mowing Machines, Steam Engines for farm purposes, Grain Drills, Horse Powers, Flax and Hemp Dressing Machines, Threshers, Seed Planters, Cultivators, and Broadcast Sowers, will take place at Geneva, between the 12th and 26th of July next. (The particular day of the commencement of the trial will be given hereafter.) The competition will be open to all who become members of the Society, and enter their machines for trial.

Upwards of $400 will be awarded to the successful candidates; and Inventors are invited to be present with their machines, and engage in this trial, which will be conducted in a manner to secure practical and reliable results, that will be of importance to the whole agricultural interest of the country.

Persons desiring to compete must become members of the Society by the payment of $1, and enter their names with the Secretary by the 5th of July, and their implements.

All desired information as to the regulations for the trial will be furnished on application to the Secretary.

B. P. JOHNSON, Secretary.

Agricultural Rooms, Albany, May, 1852.

Field Seeds.

AUSTRALIAN WHEAT—very superior. The berry of this grain is extra large, and makes the best of flour. It produces a greater average crop than any other variety now grown in New York. Several years' experience in its cultivation, proves that it is less liable to rust or mildew than other kinds; and as the stalk is large and strong, it is also less liable to blow down or lodge. Price, $4 per bushel. Other varieties of wheat, such as the White Flint, Mediterranean, Black Sea, &c.

BUCKWHEAT, of the best kinds in market.

RUTA BAGA, or Swedish Turnep Seed. The Purple Top and other superior varieties.

TURNEP SEED—Large White Flat, Long White, Red Top Flat, Yellow Aberdeen, Yellow Stone, and other improved kinds for the field or garden. A. B. ALLEN & CO.,

June, 1852.—6-tf. 189 & 191 Water st., New York.

Prices of Agricultural Products at the Principal Markets in the United States. — June 18, 1852.

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Philadelphia.	
Beef, per 100 lbs.....		a $7.50		a $7.25	$5.50	a 6.00						
do mess, per bbl..	11.00	14.50	11.00	15.50	10.00	10.50					$16.00 a	16.50
Pork, per 100 lbs....					7.00	7.50						
do mess, per bbl.	18.59	19.50	18.50	22.00	16.00	19.00	$16.50 a	17.00	$16.50 a	17.00		19.00
Lard, per lb..	10	11½	10	12½	9	10	9	9½	8	10½	10½	11½
Butter, do	12½	19	15	23	12½		8	10	8	12	14	16
Cheese, do	6½	8	7	8½	6	7	5	7	6½	6½		
Flour, per bbl.......	4.00	5.75	4.12	5.75	4.62	4.75	2.75	4.00	3.15	3.30	4.12½	5.00
Wheat, per bush....	90	1.15	90	1.05	93	1.01	71	76	63	64	93	1.05
Corn, shelled, per bu.	62	64	60	65	54	56	31	36		30	60	64
Rye, do		77	75	80	69	70			47	50		75
Oats, do	40	44½	41	43	40	41	18	23		25		40
Barley, do	60	64			67	70			33	50		
Clover seed, do	7½ pr. lb.		8 a 11 per lb.			5.50			3.75	4.00		4.12½
Timothy seed, do	$14 to 16 per tce.		2.50	2.75	2.25	3.00		2.25	1.50	2.50		
Flax seed, do	1.20	1.30	1.33	1.35	1.25	1.50		1.00		1.00		1.25
Hay, per ton........	11.50	12.00	14.00	15.00	8.00	12.00			7.50	15.00		
Wool, per lb........	26	43	33	41	24	35	18	23	22	30		
Wood, hard, per cord			5.25	6.50	4.00	4.50						

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April 10, 1852.—5-3t.

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Also, "Zachary Taylor," two years old in June, and "Gifford Morgan," four years old in August,—both bay studs by above named horse and mare, suitable for matching or stock.

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Terms—Cash, or approved notes at one year, with interest.
Scottsville, N. Y., 1852. [7-2t] J. DORR.

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He has also a farm of 154 acres of first quality land adjoining said Mills, 120 acres improved, good buildings, orchards, and plenty of running water. He will sell said farm with the Mills, if desired.

Inquire of the subscriber, on the premises.
[7-3t] J. C. PARSONS.

THE GENESEE F[illegible]ER,
A MONTHLY JOURNAL [illegible]
AGRICULTURE AND HORTICULTURE.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, JR., EDITORS.
P. BARRY, Conductor of Horticultural Department.

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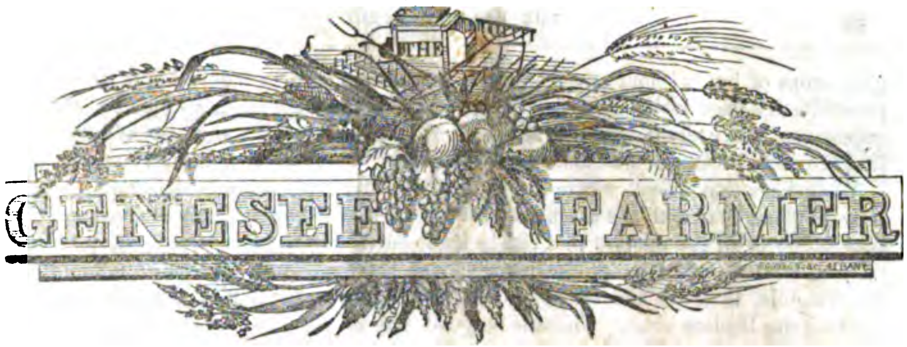

VOL. XIII. ROCHESTER, N. Y., AUGUST, 1852. No. VIII.

WHEAT CULTURE IN NEW ENGLAND.

MUCH has been written, first and last, on the practicability and profit of growing wheat in New England, and particularly in Massachusetts. At this time, the Rev. J. A. NASH, of that State, is discussing the subject in the columns of the *Amherst Express*, in which we find several interesting statements, but none of them entirely satisfactory. They all fail to inform the reader of the value of the elements of fertility removed from the soil in producing a good crop of this grain. The following account, taken from the *Transactions of the Hampden Agricultural Society*, is instructive, and doubtless reliable, so far as it goes:

"HORACE SMITH'S STATEMENT.—The crop of wheat which I offer for premium, was raised on seven and a half acres of land; the soil an alluvial sandy loam. The land was well prepared and planted with corn in the spring of 1850, and harvested an excellent crop, which was cut up and carted from the ground by the middle of September. We then commenced for the present crop, by dragging the land, (to level the corn hills,) which prepared it for the plow. This immediately succeeded, and on the 25th of September the seed was sown at the rate of one bushel and a half per acre, which was harrowed in and the land rolled. In July, 1851, the wheat was harvested, has been threshed, cleaned, and sold for $1.10 per bushel.

The product was 236 bushels, amounting to,	$259 60	
Eight tons straw, $6 per ton,	48 00	
		$307 60
Expenses for dragging the land for plow,	$2 20	
Plowing,	9 87	
Seed, 11¼ bushels, at $1.50 per bushel	16 87	
Sowing, harrowing, and rolling,	4 00	
Harvesting, at $1.25 per acre	9 37	
Threshing and cleaning,	9 00	
Cartage to market	3 00	
Land rent, $10 per acre,	75 00	
		$128 81
Net gain,		$178 79

Being a clear profit of twenty-three dollars and eighty-three cents per acre."

If a ton of wheat straw is worth six dollars, what is the value of a ton of good manure? What will it cost to give back to these seven and a half acres as much of vegetable mold, ammonia, soluble silica or flint, phosphoric and sulphuric acids, chlorine, potash, soda, lime, and magnesia, as was removed by tillage, irrespective of what the wheat plants consumed in growing, as well as all that the crop contained?

We hope that Mr. NASH will investigate this point, which for some reason has been too long overlooked by practical farmers. It is easy to understand how land made rich to yield a large crop of corn, may produce immediately after it an excellent and apparently very cheap crop of wheat. BOUSSINGAULT describes land on which wheat had been successfully cultivated every year for two centuries, by the aid of manures. The annual overflow of the Nile is said to fertilize the soil sufficiently to yield annual crops of wheat, with as much certainty as inundated meadows on the Connecticut river yield good crops of hay without any manure. The full and perfect renovation of the depauperated earth from which generous harvests have been gathered, is an object of the first importance with every considerate agriculturist. To neglect this professional duty shows that the first elements of wise and successful husbandry are either unknown or repudiated.

We believe that wheat-culture can be made profitable in Massachusetts, and the other New England States, to the extent of growing all that is needed for home consumption. In addition to all the manure that can be made on the farm, guano is now cheap enough, judging from its effects in producing wheat on the poor lands of Delaware, Maryland, and Virginia, to assist the wheat-growers north of Delaware quite as much as it does south of the Hudson river. There is no good reason why this highly concentrated fertilizer should be less valuable in grain-culture when used in Massachusetts, New Hampshire, Vermont, and Maine, than in New Jersey, Delaware, Maryland, Virginia, and North Carolina. Guano has more than doubled the value of thousands if not millions of acres in the States last named. Our New England friends will do well to experiment with this manure in growing wheat and corn more than they have hitherto done. Alone, it will fail to produce good wheat after the alkalies are measurably washed out of the soil by long tillage without adequate restitution; for 300 lbs. of guano does not supply as much potash as an acre of land parts with in bearing a fair crop of wheat. The remedy is to apply occasionally a few bushels of good ashes per acre. Where ashes are not to be had, clay that contains considerable potash, or greensand, may be used as a substitute, particularly on sandy, gravelly, and porous soils. Good virgin clay always abounds in the elements of fertility in a dormant or nascent state. These alimentary substances are brought out and rendered available by the mechanical and chemical effects of tillage. There are many advantages in resorting to fat clay to obtain the mineral food of plants. First, Clay costs nothing but the labor of subsoiling, or of hauling a short distance. Secondly, The light and heat of the sun, the frosts of winter, the oxygen and carbonic acid of the atmosphere, and the rains and dews that fall upon every square foot of land, are invaluable in developing the latent powers of rich clays; and they too cost nothing. As we have heretofore repeatedly stated, by slightly charring clay and adding a little caustic lime, whatever potash, soda, phosphoric and sulphuric acids it may contain in a before insoluble condition, will be brought out more speedily by this operation. The presence of lime in considerable quantity imparts to limestone lands, the world over, a higher reputation for wheat-culture than attaches to soils nearly destitute of calcareous matter. This is a fact of great significance, and one that our eastern and southern friends should carefully ponder. It is true that lime alone will not produce wheat, nor any other crop; but it is an indispensable element in all fertile lands, and one that is lacking in more than a moiety of the cultivated farms in the United States.

No crop shows the skill of the farmer to better advantage than that of wheat. Let him plow deep and stir all the earth, harrow thoroughly, subdue all grass, bushes, briars, and weeds, where they exist, and the crop will command the full benefit of whatever strength the soil may naturally possess, so that if manured at all, a little may go far in augmenting the harvest. Much depends on giving fertilizers the best possible chance to aid in the growth of cultivated plants. On well tilled land manure does twice the good that is realized on badly cultivated fields; and yet, many farmers seem to believe that a ton of guano, or stable manure, should do all in producing grain, no matter how poorly the soil is cultivated.

Profit and loss in rural affairs are not studied so closely and accurately as they ought to be, and must be, to attain the highest success. Not until the raw materials of crops as they exist in the surface of the earth, are entirely familiar to the husbandman, can he husband them with the best economy. To do this, he must know how to work up the things that make grain, grass, roots, tubers, fruits, and timber, with the least loss of his capital in the soil.

NATIONAL AGRICULTURAL CONVENTION AND SOCIETY.

A National Agricultural Convention assembled in the Lecture Room of the Smithsonian Institution at the federal metropolis, on the 24th of June last, in compliance with a call for that purpose signed by the Hon. Marshall P. Wilder, of Massachusetts, and the Presidents of a majority of the State Agricultural Societies in the Republic. The leading object of the Convention was to establish a National Agricultural Society; which object, we are happy to say, was fully accomplished, by calling into existence "The United States Agricultural Society."

Those who are seriously engaged in the great work of improving American tillage and husbandry in all the States and Territories which compose the Union, have long felt the want of some efficient national organization that would bring the friends of agriculture everywhere to act in concert for the attainment of a common purpose; but our country is so extensive, stretching from the Atlantic to the Pacific, and farmers have so much to do and look after at all times, and especially in the busy month of June, it was naturally feared that no object so public in its character as the formation of an agricultural society, avowedly to embrace the whole United States, could draw out a respectable delegation from a majority of them, to consult together in convention. But thanks to the agricultural press and the intelligence of the people, they are ready to sustain any well-considered plan, no matter how comprehensive, for the collection, increase, and diffusion of agricultural knowledge. The truth of this remark was demonstrated in the appearance of 152 delegates in Washington, many of whom had come several hundred miles at much personal inconvenience and expense, and for no other purpose than to attend the agricultural convention, and discharge what they regarded as a high public duty. Twenty-three States and Territories were represented.

The Convention was organized by calling Judge Frederick Watts, President of the State Agricultural Society of Pennsylvania, temporarily to the chair, and appointing R. S. Mercer, of Maryland, and Daniel Lee, of the District of Columbia, Secretaries.

On motion, a committee of seven was appointed to nominate permanent officers of the Convention; from which Mr. King, of Rhode Island, (Editor of the Journal of Agriculture,) submitted the following nominations:

For President—MARSHALL P. WILDER, of Massachusetts.

For Vice Presidents—Henry Wager, of New York; Frederick Watts, of Pennsylvania; Chas. B. Calvert, of Maryland; Wm. F. Hunter, of Ohio; George W. Nesmith, of New Hampshire; John H. Throckmorton, of Virginia; H. K. Burgwyn, of North Carolina; T. J. Rusk, of Texas; James Duane Doty, of Wisconsin.

For Secretaries—William S. King, of Rhode Island; B. P. Johnson, of New York; J. A. Warder, of Ohio; J. D. B. De Bow, of Louisiana.

The report having been unanimously accepted—

Mr. Wilder, amidst much applause, took the chair, and addressed the Convention as follows:

Gentlemen of the Convention:—I will not interrupt the proceedings of this body by any extended remarks by the chair; but I can not forbear to tender to you my heartfelt gratitude for the honor you have conferred upon me in selecting me to preside over your deliberations—an honor which is connected with a pursuit which has ever laid near my heart.

Permit me also to express my great gratification that there are present so many members representing the agricultural interest of this great Republic—some gentlemen coming from different and distant parts of the Union, at great personal sacrifice; but, whether from the north or the south, the east or the west, I extend to each of you the hand of fellowship, and I greet you as brothers in a common cause.

Gentlemen, we come here with no sinister motives; we have no political arguments to advance; we have no sectional or party purposes to promulgate: but we are here for more important purposes. We are here to advance an art coeval with the existence of the human race—an art which employs eighteen millions of our population, and four-fifths of all the capital in our fair land—an art which lies at the very foundation of all national and individual prosperity and wealth, the basis of commerce, of manufactures, and of industrial pursuits. We are an agricultural people; our habits, our dispositions, are rural. I rejoice that it is so, and I pray that it may ever continue to be so. Our country embraces every variety of soil, and is capable of producing most of the products of the torrid and temperate zones; and with a suitable application of science to this art, and a wise division of labor, with proper Governmental aid, there is no reason why American agriculture may not sustain competition with that of any other nation of the civilized globe.

The progress of agriculture, as you all know, gentlemen, has been slow in the United States; but a new era has now commenced. The old worn out systems of cultivation which have been followed by father and son, and from generation to generation, are now to be swept away, and science is to take its place in aid of honest industry. I rejoice, gentlemen, that we live at this day; I rejoice that the seed planted by the immortal WASHINGTON, and which has been watered by thousands of other eminent agriculturists, is now taking root, and that we live in our day to realize some of the proud results of their hopes.

Much of the progress which has been attained in our country is the result of individual enterprise, aided by the agricultural press; but the great motive power is confederated action—is associated effort. Gentlemen, we have met on this occasion to avail ourselves of this powerful impetus. At no period in the history of our country has there been such an assembly collected for the purpose of considering those objects for which we are brought together, and there has been no opportunity which is so favorable to the interests of the farmer.

Permit me again, gentlemen, to tender you my thanks for the distinction you have conferred upon me, and to say that in the course of our deliberations I may, with your permission, participate in your debates. [Applause.]

A committee composed of one from each State was appointed to draft a Constitution for a National Society, and prepare other business for the Convention. The following is a copy of the Constitution as reported by the business committee, which, with a few mere verbal amendments, is now the Constitution of the Society:

The undersigned, in order to improve the agriculture of the country, by attracting the attention, eliciting the views, and combining the efforts of that great class composing the agricultural community, and to secure the advantages of a better organization, and more extended usefulness among all State, County, and other agricultural societies, do hereby form ourselves into a society, and, for its government, adopt the following

CONSTITUTION.

SEC. 1. The name of this association shall be The United States Agricultural Society.

SEC. 2. MEMBERS—DUES.—The Society shall consist of all such persons as shall signify to any officer of the Society a wish to become a member, and who shall pay two dollars to the Treasurer of the Society, and a like sum annually hereafter; of delegates from the State agricultural societies in the States and Territories and District of Columbia, who may be appointed to attend the annual and other meetings of the Society, and who shall pay the like sum; and also of such honorary members as the Society may see fit to elect. Each member shall be entitled to receive a journal or publication of said Society, containing an account of its proceedings and such additional matter as shall be deemed worthy of publication, free from any expense except postage. Twenty-five dollars shall entitle one to the privileges of life membership, and exempt him from any annual taxation.

SEC. 3. OFFICERS.—The officers of this Society shall be a President, a Vice President from each State and Territory in the Union and from the District of Columbia, a Treasurer, a Corresponding Secretary, a Recording Secretary, and a Board of Agriculture, to consist of three members from each State, Territory, and the District of Columbia, to be appointed by the Executive Committees of the Societies of such States, Territories, &c., and where there are no such State Societies, to be appointed by the Executive Committee of this Society. The President of the Society shall be, *ex officio*, a member and President of this Board and of the Executive Committee.

DUTIES OF OFFICERS.—The *President* shall have a general superintendence of all the affairs of the Society. In case of his death or inability to discharge the functions of this office, the Board of Agriculture shall select a Vice President to act in his stead, and clothed with the same power, and shall perform the same duties as the President until the next annual election.

Vice Presidents.—It shall be their duty to advance all the objects of the association, in their several districts; to explain to agriculturists the character and objects of this association, and endeavor to obtain their co-operation and support; to watch the advance of practical agriculture, and to make known the results of the same, by report or otherwise, from year to year.

Board of Agriculture.—It shall be the duty of this Board to watch the interests of agriculture, as they are or may be affected by the legislation of the country, and to make such reports, memorials, and recommendations as may advance the cause of agriculture, and promote and diffuse agricultural knowledge; to examine, and when necessary, report upon the practicability of establishing agricultural schools, colleges, and model farms; to set forth the advantages of agricultural and geological surveys, and show the importance of the application of science to agriculture; to represent through their reports the relation of our agriculture to that of foreign countries, and to endeavor to obtain information from such countries; to point out the advantage of introducing any new staples, seeds, and plants; to obtain, so far as practicable, annual statistical returns of the condition of agriculture throughout the different States—all which information shall be published by said Society, and form part of its transactions.

The *Executive Committee* shall transact the general business of the Society. It shall consist of five persons, who shall designate the time and place for exhibitions, regulate the expenditures, and take such supervisory charge of the business of the Society as may best promote its interests. This body shall elect its own chairman. Three members shall constitute a quorum.

The *Treasurer* shall keep an account of all moneys, and shall pay bills only after they have been audited by the Corresponding and Recording Secretaries, and a member of the Executive Committee, and countersigned by the President of the Society or the Chairman of the Executive Committee.

Corresponding Secretary.—The duty of this officer shall be to correspond with persons interested in agriculture; at each stated meeting he shall read such portions of his correspondence as may be of general interest; and it shall be his duty to carry out and advocate the views of the Board of Agriculture, in obtaining, arranging, and publishing any information they may desire to have laid before the agricultural community.

The *Recording Secretary* shall keep a record of the minutes of the Society, and of its Executive Committee.

Sec. 4. The annual meetings of this Society shall be held at the city of Washington, on the first Wednesday of February in each year, when all the officers of the Society for the ensuing year shall be elected by ballot. The Executive Committee, however, shall be competent, with the approbation of the Society, to appoint occasional meetings, to be held at other points. Fifteen members shall constitute a quorum for business.

Sec. 5. This Constitution may be altered at any annual meeting, by a vote of two-thirds of the members in attendance, provided not less than fifty be present.

The question of applying to Congress to establish a Bureau, or Department of Agriculture, was ably discussed in convention; but the friends of governmental aid in that direction unfortunately divided among themselves—some insisting that the great farming interest demands a cabinet minister far more than either the army, navy, or post office department; while others would go no further than Presidents TAYLOR and FILLMORE had recommended—*i. e.*, create a clerkship under the Secretary of the Interior, to be called an Agricultural Bureau. Both schemes were opposed by Gov. STEELE, of New Hampshire; Senator DOUGLAS, of Illinois; ROBINSON, of Indiana; THOMPSON, of Mississippi; and many others. The following resolution, offered by Mr. JOHN A. KING, of New York, was finally adopted:

> *Resolved,* That this Convention respectfully request Congress to take action upon the subject of agriculture, and afford such efficient aid as in their wisdom shall be best calculated to advance the great interests of that branch of industry.

This resolution, insisting on the duty of Congress to do something that shall "afford efficient aid to agriculture," passed *unanimously*—leaving it to the wisdom of the law-making power to determine the way in which such assistance shall be rendered.

So soon as all State, County, and other agricultural societies, *unite their strength,* they will command both Congress and State Legislatures, in a way not to be resisted, to do all that ought to be done in behalf of the agricultural interest, which pays three-fourths of all National and State taxes. It is only by a wise co-operation that the friends of agriculture can do anything against the leaden rule of General Apathy. Let the 300 associations for the advancement of agriculture confederate under a federal head, having a National Board of Agriculture, as provided in the Constitution, and their success will be alike certain and brilliant. This will be a glorious achievement, and one worthy of a nation of farmers who own the soil which they cultivate. To say that one or two hundred thousand farmers in this free and happy country can not act harmoniously together to promote the honor and increase the profits of their noble calling, is to assail both their patriotism and their self-respect. Agriculturists love their profession, and are ready to combine their individual efforts to elevate it, until there shall be at least as many farmers in Congress as lawyers. Why not? The youth in every rural district in the United States greatly need good text-books on agricultural physiology, chemistry, geology, botany, engineering, the study of soils, and other departments of agricultural science, which they never will get unless something more than mere talk is done for agricultural education. The time for action has arrived; and all State Societies and Boards of Agriculture should appoint at once the three members in each State, Territory, and the District of Columbia, who are to form the United States Board of Agriculture. Such a Board will carry out the idea of the illustrious farmer of Mount Vernon.

With the aid of Congress, which this Board can not fail to receive, the National Society will be able to give every member more than an equivalent for his two dollars yearly subscription to its funds. The Journal of the Society, and its facilities for obtaining and distributing valuable seeds, are advantages and objects of great importance. It has not merely a continent for the theatre of its operations, but the whole vegetable and animal kingdoms of the globe to select from. Government ships and officers, that visit all seas and lands, are at the service of the United States Agricultural Society; and this Society is no more than the servant of all local societies that see fit to avail themselves of its labors, either at home or abroad. Foreign ministers, charges, and consuls in other nations, the heads of departments, and members of Congress, will all render valuable aid, if properly approached. Let us prudently adapt ourselves to the circumstances with which we are surrounded, and use the means so clearly within our reach, to place the arts, the sciences, and the literature of rural affairs in this country, in advance of those of any other in the world.

◆

SOURCE OF THE NUTRITIOUS PROPERTY OF VEGETATION.

The nourishing property of wheat, corn, and other grains, is owing to the gluten contained in them; and this gluten consists, in great part, of nitrogen. It is of course an important object with the farmer, to increase the proportion of gluten, and that is done by supplying additional nitrogen in the aliment of the plant. Carbonic acid and water are the chief sources of *growth*. Nitrogen is the principal element constituting the nutritive quality. The atmosphere contains a large quantity of nitrogen. It is not supposed to be taken up by vegetables, however, from the atmosphere, in its simple form, but, by combination with hydrogen, in the form of ammonia. By the digestion of the ammonia, the nitrogen is afterward separated in the plant and used to constitute the peculiar product, gluten, to which its nutrition is owing.

Ammonia is produced by the decay of most animal substances. In this way it is that the application of manures is so beneficial to plants;—by the supply of ammonia furnished, which being digested in the plant, results in a separation of nitrogen, which enters in the tissues of plants and produces their nutritive quality.

Ammonia is readily absorbed by water, and the rain and dew become impregnated with it, and it is thus administered to vegetables in small quantities. This may be sufficient for their existence and ordinary growth; but a greater supply of ammonia is necessary to some plants, on account of their peculiar economy. This is the case with all plants containing much gluten. And this substance may be greatly increased by a liberal supply of manures from which ammonia is more abundantly provided. These plants can therefore only be cultivated advantageously by a free application of manure, or otherwise an equivalent provision of ammonia in another form. Corn ordinarily, when raised in vegetable mold, contains nine and a half per cent. of gluten; but raised on land manured with blood or urine, has been found to contain thirty-five hundredths of gluten.

Gypsum has the quality of absorbing ammonia from the atmosphere, and yielding it again to water which may soak through it. This is the mode in which gypsum has a beneficial action on vegetation, while the gypsum itself held in solution in water is considered to be injurious.—*New Eng. Farmer.*

A knowledge of the source of the nutritious properties of vegetables, can not fail to be interesting and valuable to every farmer. The above article is well calculated to throw light on the subject, which, though so very important, is but dimly understood. We must, however, differ with our contemporary in one respect. That the nutritious value of wheat, corn, oats, &c., is in proportion to the gluten or other nitrogenous substances they contain, we believe; and it is so natural to suppose that "by supplying additional nitrogen in the aliment of the plant we should increase the *proportion of gluten* in the grain," that most people, and indeed many able chemists, have adopted the belief without sufficient evidence of its correctness. We know that wheat is greatly increased in quantity per acre by the application of ammonia in any available form — that in fact ammonia is the one special ingredient which a manure for wheat should contain. This being the case, it is not to be expected that wheat and corn, "proverbially characterized as yielding starchy seeds, and whose predominant peculiarity is to produce carbonaceous substances, would in their most perfect state of development be rich in starch rather than in gluten and other nitrogenous compounds." Mr. LAWES, who has perhaps experimented more on the requirements and composition of the wheat plant than any other living investigator, says on this point:

> "My experiments do not give the slightest indication of an increase of nitrogenous element of wheat grain by the employment of ammoniacal manures. That the average produce of nitrogen in the crop bears a certain relation to the ammonia supplied in the manure, is very evident; but the per centage of nitrogen in the grain can not be increased by means of it. In some experiments, the quantity of ammonia supplied by the manures was from 60 to 70 lbs. per acre, and in some instances more; but the analyses give no evidence of an increased per centage of nitrogen by its supply, and the highest amount obtained in the series was from an experimental plot where no ammonia was supplied in the manure."

It is very evident that we should be very careful in coming to hasty conclusions on the requirements of plants, and the influence certain kinds of manure would have upon them, from a simple knowledge of the chemical composition of the seeds, &c., irrespective of their peculiar characteristics, and without due regard to vegetable physiology.

It is, too, not true that the greater amount of gluten or nitrogenous substance the plant contains, the more nitrogen will it be necessary to supply in the manure: for, of the leguminous plants, the clover seed contains 7 per cent. of nitrogen, and that of peas, beans, and tares, 5 per cent., while wheat contains on an average but 2 per cent. of nitrogen in dry matter; yet it is most clearly proved that wheat requires much more nitrogen for its production than either clover seed, peas, beans, or tares. The recent experiments of Messrs. WAY and THOMPSON, on the "absorptive powers of soils," throw a ray of light on this interesting subject, which will probably lead to more important elucidations. These gentlemen found, by a series of experiments, that the absorptive power of soil was owing to the double silicate of alumina and soda which it contained — that when sulphate or any other *soluble* salt of ammonia was added to the soil, a decomposition took place, the ammonia uniting with the silicic acid in the place of the soda, which unites with the sulphuric acid and is washed out, while the double silicate of alumina and ammonia is left in a nearly insoluble condition. We quote from Prof. WAY's lecture:

> "But in order that they might fully understand this part of the subject, he must explain to them an idea which he had taken in reference to this double silicate of ammonia and alumina. He had already stated that water did not dissolve the whole salt, but that the silicate of alumina remained undissolved, while the silicate of ammonia was dissolved in small quantity. Now he had found that this solution of silicate of ammonia, when carefully evaporated, dried up on the sides of the dish into thin transparent scales, like very thin glass, and these scales were found upon examination to be silica; the ammonia having evaporated with the water, and leaving the silica as a transparent varnish on the dish. Was it not likely that this fact formed the true explanation of the manner in which silica was deposited on the straw of wheat? He thought it might be. Chemists had always had a difficulty in accounting for this deposition of silica on the straw of cereal plants by reference to the soluble silicate of potash and soda; and the solubility of silica in ammonia had not been before observed. By the easiest and simplest process a weak solution of silicate of ammonia, in passing through the plant, might leave its silica behind; and the probability of this explanation was increased by Mr. LAWES' observation of the loss of ammonia from the soil in the growth of corn crops. Mr. LAWES had found that for every pound of ammonia of which the nitrogen was fixed in the wheat, in the shape of aluminous constituents, other four pounds were lost to the soil in the growth of the crop — that is to say, that five pounds of ammonia were required to produce a quantity of wheat containing nitrogen equal to one pound of ammonia. This loss would at once be accounted for, and would inevitably result, if the deposition of the silica were due to the action to which he had referred."

Thus it would appear that instead of plants which contain the largest amount of nitrogen requiring the largest quantities of ammonia or nitrogen in the manure, it is more probable that plants require ammonia in proportion to the amount of silica they contain; so that nearly all the grasses—wheat, corn, oats, barley, &c.—would require much more nitrogen for their perfect development than the leguminosæ—clover, beans, peas, &c.,—which, compared with the cereals, contain but little silica. And this conclusion is sustained not only by direct experiment, but by the successful practice of the best farmers in this country and Europe—clover, peas, beans, &c., being considered the best possible preparative for the wheat crop—better, in many cases, than the summer fallow; while the succession of cereals always, unless the soil is kept up by manure, produces exhaustion.

ENGLISH AND AMERICAN PLOWING.

In the cultivation of the soil, the first and most important operation is its *thorough* pulverization, loosening the soil to enable the roots of plants to penetrate and perform their functions, and admitting the atmospheric air, the presence of which is not only beneficial in disintegrating the minerals of the soil, but absolutely necessary to render all the food of plants fit for assimilation. The spade is perhaps the best and simplest implement to accomplish this object, but in extensive farming operations the slowness and expense of the process are sufficient to warrant the opinion that it will never, as has been thought by some, be generally adopted.

The plow is necessarily a much more complex implement, inasmuch as the labor of the horse is substituted for that of man. When we look at the rude and simple wooden plows with only one handle to guide them, which were used very generally a century ago, and which are in fact now used in the Hebrides and other countries in the old world, and compare them with one of our American plows, so neatly made and beautifully finished that it would be an ornament to a gentleman's drawing-room, we have room for a little gratulation, and are apt to imagine that now we have arrived at perfection in the art of plowing. Yet even now much difference of opinion exists as to what good plowing really is—some liking wide, flat furrows, and others narrow, lapped ones; and it is this disagreement of opinion that constitutes the difference of plowing in Great Britain and America.

The best Scotch and English farmers consider that the *depth* and *width* of furrow should bear a constant proportion—that the furrow should be rectilinear—and that, when raised, the exposed surfaces should be of equal breadth on either side the furrow. Any departure from this rule is considered a positive fault; and in deciding on the merits of different plowing, this is made one of the standard criteria. The most approved plowing in Scotland is a furrow seven inches deep by ten wide, with a lap of three inches, thus leaving seven inches on each side of the furrow. A furrow of this proportion is considered to be easier turned than any other, while more soil is exposed to the meliorating influence of the atmosphere; and when dragged down, the weeds and grass, or clover, &c., are better covered and rotted, while a much deeper and better bed of loose soil is prepared for the seed.

Theoretically, this is doubtless the best mode of plowing, and the nearer we approximate to it in practice, the better. American farmers, however, are not content to walk from one end of a field to the other, and only turn over nine or ten inches of sod; fourteen to twenty inches suit their go-a-head views much better. And so it is that we usually plow furrows which in Scotland or England a farmer would not allow us to turn if we would plow the land for nothing;—at least, so we have often been told by good English and Scotch plowmen. There is a reason for this: the comparatively cold and sluggish climate of Scotland has not that decomposing and meliorating effect on the recently plowed soil as has the intensely cold and hot weather of America; and so it is that we can turn over for our summer-fallows furrows which in Great Britain would never be got to pieces in one twelve-month, whereas here they decompose and fall all to pieces when cross plowed, though there is often but six weeks between the first and second plowing. Nothing surprises old country farmers more than this. We have heard good English farmers say, after they had been in the country a short time, "I never would have believed that such great wide furrows would tumble to pieces so readily in such a short time." This is undoubtedly the case; and, indeed, if it were not so, such is the shortness of the plowing season in the northwestern and eastern States, we should find it very difficult, much more so even than at present, to get our land ready for the seed.

Yet, while we admit this, we would not argue in favor of wide furrows, unless a corresponding depth be observed. Thus, if we plow a furrow fourteen inches wide, it will be necessary to go ten inches deep, with a lap of four inches, to get the maximum of surface exposed to the atmosphere, and have the sides of the upturned furrow at an angle of 45 degrees from the bottom surface. In plowing clover ley for wheat immediately before sowing, as is generally done in Great Britain, we think the Scotch mode superior to any other. We should, however, like to hear our correspondents' views on this subject; for, as plowing lies at the foundation of all good farming, it is certainly important that as much light as possible should be thrown on the subject, and that it be done in the most scientific, economical, and expeditious manner possible.

In plowing a clover sod but once for wheat, after grazing it in summer or taking off a crop of hay, the great difficulty is in destroying the grass and weeds. We have now in our eye a field that was well manured and plowed in this way last fall, just previous to sowing. It looked exceedingly well the fore part of winter and in early spring; but the grass grew so thick and strong that the wheat was much injured, and turned out a light crop. In Norfolk,—which, though naturally one of the poorest sands, is cultivated better and yields heavier crops than any other county in England,—they use an iron roller about two and a half feet in diameter, and about two inches wide at the circumference, which is drawn between every furrow after it is turned over. It is drawn by one horse, which walks after the plow in the furrow, while the roller passes on the juncture of the two last turned furrows, pressing every bit of grass, weeds, &c., completely out of sight; so that when the land is dragged, it is some five or six inches below the surface. It does only one furrow at a time; so that it is almost as expensive as plowing, taking a horse and boy to do as much as a team will plow. Yet we believe it pays well, and is one of the cheapest and most effectual means of destroying grass and weeds in wheat. Those who have never seen it used can hardly imagine the benefit which attends its adoption.

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FLAX-CULTURE AND FLAX COTTON.

There can be no doubt that the soil and climate of a greater part of the United States are well adapted to the growth of flax of good quality and quantity, and that we shall soon be extensive exporters instead of as now importers in linen and flax to the amount of nearly nine millions of dollars per annum.

The Chevalier Claussen process of preparing flax cotton is doubtless one of great value, and patent rights have been sold we believe for most of the eastern and western States, so that farmers who raise flax will be able to sell it to the manufacturer in the raw state, and realize much higher profits than when they had to incur the expense and labor of preparing the flax themselves.

It has hitherto been the practice with many flax-growers to raise it only for the seed, taking no account of the fibre, which is in reality the most valuable part, and it was thought incompatible to grow good flax and seed. This, however, we believe is a mistake; good seed and good flax have been often raised together, and will be much more generally when the value of flax is better understood. In pulling flax, it is not easy to seize upon the proper time, so as to make sure of good flax and seed. If pulled *too early*, much seed is lost; and if it be delayed only a short time *too long*, the quality of the fibre is greatly deteriorated. The seed must give way to the fibre. It is recommended to let the flax be fully out of flower, the seed balls well formed or set, and seed turning brown, and the flax stalks yellow beneath though green at the top; it is then in the best stage for pulling with most profit to the grower. The pulling should now be carried on as rapidly as possible. It is done by the puller taking hold of a small quantity near the top as it stands, and carefully pulling it up, keeping the root ends even. It is then tied into sheaves or bundles, and set up in the field like wheat. Rippling is the next process, and is done by a machine containing a row of upright teeth so adjusted as to take off the seed, leaving the fibre uninjured. The Flax Improvement Society of Ireland says that the rippling should take place simultaneously with the pulling—that the flax should not remain in the field the second day, but be *rippled* immediately and taken to the steeping place before it hardens.

At the annual meeting of the Tippecanoe County (Indiana) Agricultural Society, the principal subject of discussion was the culture of flax, when the Hon. H. L. ELLSWORTH, late Commissioner of Patents, stated that—

> "A committee had been sent from Philadelphia to France, Holland, England, and Prussia, for the purpose of examining the modes of cultivation, best soil, etc., and that the committee had reported highly favorable as to the adaptation of our soil and climate for raising this important product. The company who sent this mission abroad possessed a heavy capital, which they have invested in the manufacture of the article. They offered to make a contract with him for $100,000 worth, and they offered for flax delivered in Philadelphia, equal to Russian, $250 per ton. Mr. E. stated that he had sent by mail for a sample of the quality, and intended to enter into the arrangement provided a similar kind could be raised upon the prairie lands. He had selected seven or eight different *kinds* of land, upon which he had sowed different kinds of seed, from one to two bushels to the acre, to test the yield of seed and lint. At the price named, the lint would be worth $40 per acre. There was a machine coming from Springfield for dressing flax. A man and boy with it work out one and a half tons of stems a day. There can be 14 bushels of seed raised to the acre. This *will* yield nett $6. He had no question but that flax was the best article to cultivate in this country, as a greater value could be got into a smaller compass than any other product our soil and climate could raise. If the oil should be manufactured here, the cake would furnish superior fattening food for cattle. It is now sold to export for that purpose.
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> "The flax cotton in its second process of preparation has a very strong resemblance to cotton, and is superior in many respects. It has a longer staple. The lint is hollow, cellular, like the human hair. In the chemical agencies employed to prepare it, soda is used to fill these cells. Then an application of a weak solution of sulphuric acid causes a contraction which blows it up. The hypochloride of magnesia is then used to finish it for spinning. Flax cotton thus prepared contains a felting quality, which cotton does not. While alkalies destroy high coloring in cotton, it does not in flax cotton. The latter can be made a very high color. If one-half is mixed with silk, it is almost impossible to tell it from pure silk. It makes fine bagging in a common cotton machine. A mowing machine will cut the crop. A yield of 10 bushels seed and 400 lbs. lint can be safely calculated to the acre. It can also be mixed with wool for winter clothing. Flax cotton bids fair to be an article of great export. Mr. E. had offered to raise 1000 acres for the Philadelphia company, if the quality would answer. He expected to see flax cotton sent from here the same as cotton from the south."

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TO REDUCE SOLID FEET TO BUSHELS—Multiply the number of solid feet by 45 and divide the product by 56; the quotient will be the number of bushels.

Reason.—As one bushel contains $2150\frac{2}{5}$ inches, one solid foot is $\frac{45}{56}$ of a bushel.

Example.—How many bushels in a crib or box 8 ft long, 4 ft. wide, and 2 ft deep? $8\times4\times2=64$, which multiplied by 45 and the product divided by 56, gives $51\frac{3}{7}$; the number of bushels which the box contains. M. K.—*Bentonville, Ind.*

THICK AND THIN SOWING.

THE proper quantity of seed to sow per acre is a matter of much importance in agriculture, and consequently much difference of opinion exists on the subject. In Great Britain the point of thick and thin sowing has perhaps been more discussed than with us; and after so much investigation, each system has its strenuous and perfectly satisfied advocates. Before the days of DAVIS, MECHI, HUXTABLE, and other new lights, the amount of seed sown in England was generally, of wheat, three bushels; barley, three and a half; and oats, four. These gentlemen, however, showed that by under-draining, subsoiling, and *high manuring*, a large crop of wheat might be obtained from *one peck* of seed per acre. This was considered a wonderful result, and the number of bushels of wheat that would be saved to the county by the adoption of their sowing system was calculated, and a great parade made of the result. But while it was true that a good crop could be obtained from a peck of seed per acre, if it all grew and did well, it was found that in a certain number of acres there was invariably some that did not do well, from the seed not germinating, winter-killing, &c., and that the loss sustained by such failures more than counter-balanced the profit by saving seed; and the conclusion arrived at was, that it is necessary to sow much thicker than the actual requirements of the plants demand, on purpose to insure a good crop in all cases; so that, as is usually the case, the "happy medium" is generally adopted, and two bushels of wheat per acre would be about the average quantity of seed sown in Great Britain. It is generally considered that from a peck to a half bushel less seed is required when drilled in, than when sown broadcast. In Canada, especially in the lower Province, much more seed is sown per acre, of wheat, barley, and oats, than with us; and indeed we have often thought our farmers are much too sparing of seed, especially of oats and barley. When wheat is drilled in, we consider that one and a half bushels per acre are sufficient if the soil is rich and the seed well put in; but when sown broadcast, we should always prefer two bushels, and in many instances two and a half bushels would be none too much. A less quantity of seed would often produce as good a crop, but we consider it best not to run the risk of losing half, or even a part of the crop, for the sake of an extra peck or two of seed per acre.

Some difference of opinion exists among farmers, as to whether rich or poor soils require the most seed. It is argued on the one hand, that if the soil is very fertile, the plant will grow much stronger and branch out considerably; and if there is too much seed sown, the plants will still branch out, and being too thick on the ground they will grow up fine, and the crop will be laid. Others say that if the soil is poor, or destitute of a sufficient amount of fertilizing matter, it is certainly bad policy to increase the number of plants to consume it—that a much wiser plan would be to have fewer plants, and let each of these have sufficient food and be perfectly developed, and not have a large number, none of which can be properly matured from lack of the necessary ingredients. This appears good reasoning, and is perhaps correct in the case assumed; but it is not the true point at issue. If the soil does not contain sufficient ingredients for a crop of wheat, it should not be sown at all; for it is very doubtful if, in such a case, the plants would thrive and do well, even though they were planted so far apart as to give them the required amount of ingredients it the soil.

The point to decide is, whether a soil that will produce a crop of wheat of twenty or twenty-five bushels per acre, requires more or less seed than one that will produce thirty-five or forty bushels per acre. In such a case, we decidedly think that the rich land would require the least seed, for the reason that it would grow so much stronger and bushier than on the comparatively poor soil.

We make these remarks this month, in the hope that some of our practical correspondents will favor us with their views and *experience*, in time for the next number.

Condensed Correspondence.

Large Hog.—I slaughtered, on the 9th of March, a hog *fifteen months old*, that weighed 530 lbs. Daniel Dawson.—*Beaver Co., Pa.*

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Weight of Merino Lambs.—I have some good sized lambs; one of them at nine days old weighed 17½ lbs., and is now (May 29,) two months old and weighs just 50 lbs. They are of the French Merino breed. Isaac M. Gillett.—*Clyde, Wayne Co., N. Y.*

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Spanish Merino Sheep—Good Shearing.—I have a flock of 46 sheep, from which I cut 288 lbs of good, clean washed wool, which is an average of 6¼ lbs. per fleece. Of these 46 sheep there are 29 ewes, all of which had lambs this spring; 9 yearling ewes; 7 yearling bucks; and 1 three years old buck, which cut 12¼ lbs. washed wool. Who can beat this in Genesee county. H. N. Wright. *Alexander, N. Y.*

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To remove Garlic Taste in Butter.—A friend of mine who keeps a butter dairy says, to destroy the taste of garlic in the butter, when cows are pasturing where garlic grows, put into the pail as much pulverized saltpetre as will lay on a half-dime piece. Put it in before milking, each time the pail is emptied. He says the butter will not taste of garlic in the least. Jacob Howell.—*Germantown, Pa.*

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Dropped Manure.—I see in your paper many articles respecting agricultural economy, that are interesting to the practical farmer. I thought I would add a little to its columns, if you think this worthy of a place therein. All manure that is dropped by cattle in fall and early winter in meadows, &c., should be beaten as soon as ripe for that purpose, or when it becomes thawed in winter by the warm days and rains. Beat it to pieces finely, so that the strength may soak into the ground by the next rain or thaw that may come; this will prevent its drying up. If it is let alone until spring, and then beaten, it will dry up and lose its value in a great degree. J. Potter.—*Scituate, R. I.*

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Plaster on Wheat in the Fall.—As many farmers in this vicinity are putting plaster on their wheat in the fall instead of the spring, as heretofore, I have taken pains to inquire the reason of the change; and believing the information obtained important to wheat-growers generally, *I* take this method of giving it to the million, if you think proper to place it in your widely circulated journal.

Wheat, when plastered in the fall, obtains more root, and is thus enabled to stand the frosts better: it has the assistance of the plaster at a season of the year when it is almost impossible to go over the fields, and when it is most needed—namely, the very early spring: it gets its growth and ripens in good time; whereas, when applied in the spring, the wheat continues to grow late, sometimes to the injury of the crop—a superabundance of straw, falling down, rust, &c., &c., oftentimes being the consequence. A Subscriber.—*Niagara Co., N. Y.*

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Gapes in Chickens.—I noticed in your June number an article on *Gapes in Chickens*—cause, cure, &c. Being a subscriber to your valuable paper, I thought I would give my views and experience on the same subject. The writer stated the cause of gapes in chickens to be exposure to cold, also giving what I do suppose to be a most excellent cure. In the first place I would observe the old adage—"An ounce of prevention is better than a pound of cure." I fully admit that cold, wet weather, and exposure to cold, are fruitful causes of gapes in young chickens, though in my opinion not the greatest cause. The cause that mainly produces gapes in young chickens, is unnatural food. By noticing the habits of animals in a state of nature, we learn how best to treat them when domesticated. This I give as a general rule, as I have never seen the fowls alluded to in a state of nature. Fowls of all kinds, when not domesticated, do not hatch their young until their proper food can be obtained; (worms, bugs, and insects are the natural food for chickens;) hence the importance of giving some food of a similar character.

I will now, as briefly as possible, state how to prevent the gapes. First, spread some wood ashes on the ground, where water will not lay or run on, and thereon place your coop, made close on top and all around except the south side, which should be open to admit the sun and to allow the chickens to go out and in. Also have the coop so arranged that the hen can not get where you place the food for the chickens after they are two days old. Feed no raw corn meal dough, as is the common practice, but give a sufficient quantity of baked bread without salt, made of either corn or wheat meal, and at least one feed a day of curd made of sour milk, and every two or three days give some fresh meat—beef, veal, mutton, &c.—either raw or cooked, chopped up fine, and mixed with the curd; and as soon as the chickens are old enough to eat grain, give some wheat and small corn, (the hen can be fed principally on grain,) and a supply of water will insure your chickens from the gapes. CHESTER COUNTY.

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IMPOVERISHING THE SOIL.—I have been particularly interested in reading the editorial remarks on the subject of the exhausting system of cultivation practiced by too many of the farmers of our country, and have wondered that the appeals to the reason, the interest, and the credit of their brethren, so often and so ably made by the editors of the *Farmer*, did not more frequently elicit a response from some of the thousands of your readers, who can not but be sensible of the importance of the subject; and though I am sensible that the space might be occupied by the production of an abler pen, yet, as few seem disposed to devote their time and talents to the subject, (if we may judge from the contributions to your columns,) I have concluded to offer a few remarks, which you are at liberty to dispose of as may seem to you best.

It is natural to suppose that a large proportion of the inhabitants of our country will, for the facilities of commerce, manufactures, &c., congregate in cities and villages, and a consequent demand will be made upon the farmer for the means of sustaining life and for the raw material for manufacturing, which are produced from, and consequently exhaust, the soil of its elements, particularly such as enter sparingly into its composition. These are circumstances over which we have no control, nor would we wish, were it in our power, to reverse them; the farmer is under the necessity of exchanging the products of the soil for those of the labor of the mechanic and manufacturer, though it may be at the expense and ultimate exhaustion of certain essential elements of his food and clothing. These are natural results, and Nature, ever right, is as uniformly kind; for although she has not furnished in inexhaustible quantities every essential element to every soil, yet she has placed all within our reach, though not always in such quantities, nor so easy of access, as to render us justifiable in wasting such as are already in our possession.

Now, to supply this necessary demand of the inhabitants of cities and villages, and at the same time preserve the primitive fertility of the soil, it appears to me quite necessary that we ascertain, first, what are the elements of our cultivated crops; second, which, if any, of these elements are deficient in our soil; and thirdly, whether the manure furnished by our animals contains the deficient materials in sufficient quantities. As to the first, we find that carbon, oxygen, and hydrogen greatly predominate in all vegetables, besides which the common earths, silica, alumina, and lime, enter into the composition of different plants in variable proportions, as also do soda, potash, and sulphuric, phosphoric, and some other acids, besides nitrogen, chlorine, and some other substances. Secondly, few soils are deficient in carbon; and if they are, the atmosphere is the great reservoir, from which perhaps vegetables absorb through their leaves all that is requisite, in the form of carbonic acid gas. The necessary quantity of oxygen and hydrogen is furnished from water. Silica and alumina are inexhaustible elements of almost every soil, whereas lime is deficient in some; but an abundant supply is found within a reasonable distance of every section of our country. Potash is rather an abundant material in most soils, but it enters so largely into the composition of most plants, that it is by no means inexhaustible; and if by a waste of the materials that furnish this indispensible the quantity should become deficient, we shall find that an artificial application will be made at an expense that will greatly diminish the profits of our business. Soda and chlorine may, if deficient, be furnished by an application of common salt, and sulphuric acid by that of plaster. But there is an element of the staff of life, a component part of corn and wheat, the substance of which our bones are mainly composed—to wit, the phosphate of lime—which, important as it is, is furnished naturally in the soil in quantities by no means inexhaustible; and until recently no important depositions of this mineral have been known to exist in our country; but, thanks to the scientific exploration of Prof. EMMONS, phosphate of lime has been found in large quantities somewhere near lake Champlain, how easy of access I know not, but with our present and increasing facilities for transportation, no doubt but the discovery is a great acquisition to the means of renovating our worn out lands. Nitrogen, which is an important element of some of our most important crops, is furnished from ammonia, which being very volatile, is disengaged from all putrifying animal and some vegetable substances, and having a strong affinity for water, is absorbed and returned to the earth by falling rain.

Thus it seems nature has provided means for replenishing the soil with the substances that growing crops are constantly drawing from it, either by her own process or by placing them within our reach; but the natural process is too slow for us of this railroad age, and that of purchasing and transporting them from a distance is what few will resort to as long as they can raise half a crop. It is true our farms may be kept up to their natural state of fertility by a judicious application of all the manure that could be made from the crops that are grown upon them; this is self-evident: and it is just as evident, that if the farmer sends to market two-thirds of the grain that he grows, and though he keeps stock enough to consume all the grass, hay, vegetables, and some grain, and disposes of the product of these in the form of beef, pork, wool, butter, &c., he is exhausting his soil of the elements of those articles, the production of which alone gives his farm its value.

A further and more censurable cause of the deterioration of the soil, consists in the waste of the fertilizers within our grasp—the manure of our own stock. How many farmers throw down the bars of their farm-yards, (for such seldom have gates,) and suffer their cattle to stroll at their leisure upon the highway, or along the lane that leads to their watering place, perhaps standing a great part of the day on the leeward side of a fence or hill that affords a better shelter than the bleak and dreary yard, purposely located on a hill so that the nasty leachings may run off, perhaps in the road or brook, and the yard be nice and dry. How many suffer their swine to run at large upon the highway what time they are not in some neighbor's cornfield or orchard. And thus, for six months in the year, what might be accumulating to fertilize the soil is scattered along the highway, to annoy and bedaub the feet of their wives and daughters. How many suffer their manure to be in their yards during the summer, exposed to the sun and rains, until by fermentation the ammonia and other volatile parts are wafted by the winds to fertilize other lands, and the soluble parts are either poisoning the water of the springs and brooks, or are enriching the earth far below what will ever be available.

Now, I would ask, how is it possible, under such a system of management, for the soil to retain its primitive fertility? And that this is not an over-wrought picture of the practice of quite too many of the farmers of our country, I think will be readily conceded by every farmer of common observation. But I am well aware that it is easier to find fault than it is to prescribe a remedy, and much easier to propose a remedy than to adopt it. My views with regard to the remedy are *perfectly in* accordance with those set forth by the editors of the *Farmer*, and perhaps I shall suggest nothing new when I say that, in my opinion, the first step towards a thorough reform should be a general diffusion of scientific information among the agriculturists of our country. The time has gone by when it was generally believed that no other learning was necessary for the farmer, than to read and write, and a sufficient knowledge of arithmetic to compute interest. It is now believed—it is now known by some, at least,—that our profession calls, or should call to its aid, more of the physical sciences than any other profession or business whatever. The earth that we cultivate is a great laboratory, where nature on a grand scale is, by chemical affinities, effecting the decomposition and new combination of the various organic and inorganic materials of which its surface is composed. The structure, position, and elements of the various strata of the earth's surface, have an important bearing upon its productiveness and the facilities for its proper cultivation. Why, then, should not the farmer acquaint himself with the sciences of chemistry and geology? And as his every day business is with nature in her several departments of the animal, vegetable, and mineral kingdoms, those of botany, physiology, and others, would naturally suggest themselves as applicable to his business. But to those who have not the leisure or a desire to acquire much of the knowledge refered to, as well as to those who have, I would say, and say it with emphasis, *husband the means that are within your reach; keep as much stock as is consistent with your interest.* Perhaps our markets are as well supplied with meats, butter, &c., as is profitable to the consumer or to the interest of the producer, at their present relative prices. If so, it should not be increased. But the quantity and quality of the manure may be vastly improved and increased by confining every animal to properly prescribed limits—by keeping the manure from the influences of the sun and rain—by preventing the waste of the liquid part, and strewing it frequently with plaster, or other substances calculated to fix and retain the gases. Swamp muck would answer a two-fold purpose by retaining the gases and augmenting the quantity. S. H.—*Plattekill, N. Y.*

FRENCH MERINO SHEEP.

BY GEO. CAMPBELL, OF WEST WESTMINSTER, VT.

I RECEIVED your communication, and was very glad to hear you express the determination not to publish anything unless on examination you thought it to be for the interests of your subscribers. I am of your mind, that the "agricultural papers have been too much used to advance the interests of speculators;" and I also agree with you that publishers should be more cautious, and not publish articles until they are satisfied that they contain nothing but *truth*. Anything I say in relation to the subject will not intentionally be misrepresented.

I send you a wood cut, engraved from a Daguerreotype, of a group of French sheep imported by WM. CHAMBERLAIN, Esq., of Red Hook, of your State, and myself, one year since.

The buck "Matchless," represented in the accompanying cut, is three years old, and weighed on the first of last March, 261 lbs. His fleece of one year's growth was 20 lbs. 12 oz., after losing a portion of it on the sea voyage. As to the shape, constitution, thickness and fineness of wool, this buck is considered by all who have examined him to be equal to any of the breed. He was my first choice in France, and was very much admired there, especially by some gentlemen from Australia, who owned large flocks of sheep, and were in France for the purpose of buying bucks to cross with their sheep, which originated in Germany. One of these gentlemen informed me that his number already reached 44,000, and that he intended to increase it until it reached 100,000. This man alone wanted 100 bucks for the service of his own sheep. He also informed me that others from his country were making preparations to travel in France and Spain, for the especial purpose of selecting sheep, with a view to increase the weight of fleece, and if possible to retain the fineness. So you see that not only we "Americans" have the "sheep fever," but that it is rapidly spreading over almost the whole world.

The live weight of the ewes here represented, is about 125 lbs. each. The average live weight of our whole flock of this breed, after having been shorn, did not vary much from 100 lbs. The average weight of fleece of the whole flock, 12 lbs. 8 oz. In selecting the sheep, I regarded a large size as a matter of secondary consideration, choosing those that would produce the most fine wool, according to the cost of keeping.

It is believed by many that the French Merinos require more than ordinary feed and attention, to keep them in good condition; but my experience with them, thus far, leads me to the conclusion that they will thrive well on ordinary keeping. They require nothing but a good pasture during the summer season. I gave mine nothing more. They are well adapted to our climate, and will bear exposure to storms equally as well as any sheep in the country. A portion of ours were turned off to pasture last June, and came to their winter quarters looking remarkably well. They had no grain of any description, nor were they sheltered from a single storm during the season.

Although the French sheep possess many desirable qualities, I should be unwilling to say that they are *greatly* superior to all other breeds in every particular, but believe that all experienced and impartial judges admit that they possess the following desirable points, viz:

1. A good vigorous constitution.
2. That they carry a heavy fleece of wool, of a fair grade; and
3. That they are gentle and docile in their dipositions, with an easy propensity to fatten.

It is my belief that the above qualities are better combined in the French sheep than in any others; but where wool alone is the object, I am of the opinion that there are other varieties of the Merino, of a less size, which will yield as much or more wool, and

GROUP OF FRENCH MERINO SHEEP.

of a finer quality, in proportion to their size, and consequently the cost of keeping, than those under consideration.

There are, perhaps, some few improved flocks of the old Spanish stock, that will compare favorably with the French sheep, for the profitable production of wool; but the variety to which I have more particular reference is the Silesian Merino. I send you a cut of a group of SILESIAN MERINO EWES, which represent them precisely in the same position that they were taken in a daguerreotype view as they were standing in the barn-yard, and can not show all of their good qualities. Still, enough of them are shown so that one may judge of the character of the sheep.

The original stock of these sheep were from the Infantando flock, imported from Spain in 1811 by a Silesian gentleman who was in every way well qualified for a successful sheep-breeder, and who gave his personal attention to the business. They are about a medium size, well formed, and have every appearance of being hardy animals, often attaining a great age. One ewe of this flock lived to be twenty-one years old. The superiority of these sheep is in the excellence of the fleece, which is much finer, thicker, and evener than the common Merinos of this country. The quality will compare well with many Saxon flocks; and as to evenness and thickness of fleece, which holds out remarkably well on their belly and legs, they have no rivals. The length of staple is somewhat shorter than many other Merino sheep, still they produce a heavy fleece. Their wool is white, crimpy, and oily, which circulates freely to the outer ends, forming a dark surface, which is not only beneficial to the wool, but partially protects them from the storms.

I am confident these sheep will prove well for farmers living in sections where wool is the greatest object, and who prefer a ***heavy and fine fleece*** to a light one.

It is the prevailing opinion among wool-growers, that in proportion as the wool grows finer the fleece becomes lighter. But in this point I must differ from them. It has long been my opinion that as much fine wool can be produced from a given amount of keep-

GROUP OF SILESIAN MERINO EWES.

ing as that of a coarser grade, and my experience for the last few years has confirmed me in this belief. I am fully satisfied that one hundred or one thousand pounds of fine Merino wool can be grown at a less cost than an equal amount of an inferior quality.

Our Silesian bucks were used by several of my neighbors, and the cross with our common Merino ewes seems to be of a *high* nature. Many of the lambs are wrinkled all over their bodies, and are good sized and well shaped, without any hair or jar upon any part of their bodies, and no doubt will add to the weight as well as to the fineness of fleece. The weight of the ewe's fleeces last year was 7 lbs. 10 oz. unwashed, the growth of 10 months. The present season, in order to more thoroughly test their true value, they were well washed, first by well soaking them, then after letting them stand in the sun an hour or more, taking them into the water under a good spout and washing them until the dark outer ends of the wool became white and the water looked perfectly clear as it ran from the wool. After suckling lambs from January to May, and cleansing in the above manner, the average weight of the whole flock was 4 lbs. 5½ oz. Our bucks of this breed have not been sheared this year, but last year their fleeces weighed from 7½ to 10½ lbs. of ten months growth only.

There is of late considerable attention given to the subject of wool-growing, and I hope to hear from others engaged in the business through the pages of the *Farmer*. If farmers can be convinced that they can grow fine, soft wool as cheap as that of a coarse, harsh quality, they will surely enter into the business with a good deal of interest.

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Cutting Oats.—Some of our contemporaries have been recommending farmers to cut their oats when quite green, stating that the straw is much better for fodder, and that the grain fills and yields quite as well as though left till quite ripe. We do not know but this is true to some extent, but are inclined to think that oats are the worst of all our grain crops to cut early, and we prefer to let them get so ripe that a few of the first formed grains will shell out, obtaining in this way a much heavier and fully matured grain.

Horticultural Department.

CONDUCTED BY P. BARRY.

NOTES ON STRAWBERRIES.

For the benefit of those of the readers of the *Farmer* who are desirous of information on fruits, we jot down, while fresh on the mind, the results of another year's experience.

First among the fruits of the season comes the *strawberry*. The culture of this fruit is every year attracting more attention; around Rochester it is assuming considerable importance; several large market plantations are already pouring in their abundance. The prospect is that Rochester will be soon, if it be not already, the best supplied town in the United States with this delicious fruit. We are quite confident that *now*, in point of quality, the strawberries of the Rochester markets compare favorably with those of other places; but there is yet great room for improvement. Our growers generally take good care of their plantations the first or second year, and produce splendid crops; but the third, and after, the beds get old, the ground all covered, and the fruit runs down to the miserable *market* size. But purchasers are learning to buy and eat, as we learn to cultivate; they are becoming more difficult to please and more discriminating in their prices, so that by and by cultivators will discover that it will not pay to be slovenly.

Cincinnati has almost a "world wide" strawberry fame. Her cultivators have penetrated so deeply into its interesting philosophy, that the most learned among the modern Athenians, with all their pomological wisdom, can not get along without an occasional lecture from them. They have been *pioneers* in the extensive culture of the strawberry, and have promulgated, in the face of stern opposition, some wholesome truths in regard to "stamens and pistils," now very generally carried into practice. But, judging from samples sent this way the present season, and from reports of eye witnesses, their strawberries are far behind those of Rochester, in point of size and beauty at least. We have been looking over the report of the fruit committee on their exhibition of the 3d and 4th of June last, and find that *McAvoy's Superior*, that last year received Mr. Longworth's premium of $100, has been again awarded the first premium as the best variety exhibited. *Schniecke's Pistillate* is highly spoken of, and many new promising varieties are announced.

The display made by the *Genesee Valley Horticultural Society* on the 25th and 26th of June last, has perhaps never been surpassed, if equalled, in this country. R. G. Pardee, Esq., of Palmyra, exhibited about forty varieties; several others, from twelve to twenty varieties each. From among these, the fruit committee, consisting of practical cultivators and critical judges, awarded both the first and second premiums to *Burr's New Pine*, "*placing flavor and productiveness before size.*"

This would seem to answer the question, What is the best strawberry grown around Rochester? For several years—indeed, ever since its introduction—the *Burr's New Pine* has been acknowledged to be one of the finest flavored fruits that has been grown or exhibited here. No fruit ever acquired such a popularity in so short a time. But it is worthy of it. The plant is hardy and productive; the fruit large, handsome, and good. The fruit committee of the *Albany and Rensselaer Hort. Society* awarded to it the first premium both last year and this. The report this year reads thus:

> "For the best and finest flavored variety, to Joel Rathbone, for *Burr's New Pine*—beautiful specimens—$2.
>
> "For the second best and second finest flavored variety, to C. P. Williams, for *Hovey's Seedling*—very large and beautiful specimens—$1.

"The committee, in awarding this premium, wish to remark, that notwithstanding they think the flavor of *Burr's New Pine* more delicate and delicious than that of any other variety exhibited, still it is not considered by them as beautiful, as hardy, or as prolific, as the *Hovey's Seedling*, and consequently not so desirable for cultivation on a large scale."

At Rochester the *New Pine* is generally considered more productive than *Hovey's.* We have not seen a crop that would form an exception to this.

The *Large Early Scarlet* is another sort that stands well with the growers here; it never disappoints. Our committee report it "early, productive, and a valuable fertilizer." We have never known it fail to yield a good crop, and it is patient under bad treatment—doing well where others would die out. If we were to be confined to one variety, we should venture to choose this.

Hovey's Seedling is popular here and everywhere, on account of its great size and beauty. In *size* especially it surpasses all others except the *British Queen*, but it is by no means a great bearer in the gardens of this part of the country, whatever it may be elsewhere. It is more variable in this respect, too, than many others. This season the crop here has not been so good as usual. We went some twenty-five miles almost on purpose to see a bed of this variety from which great things were expected, but we found it a total failure. We saw a large plantation of the most luxuriant plants, rejoicing in the most generous treatment, but not a perfect berry was to be seen. The cultivator is renowned in the art of producing wonderously large strawberries, but this time he made a sad failure. He is said to belong to the "old school," and is therefore an unbeliever in "stamens and pistils"—the necessity of providing a fertilizer. This must be the cause of his failure; and it has probably cured him of his unbelief, for we saw where fresh rows of staminate flowered plants had been not long planted near the *Hoveys.* We think if he had planted his fertilizers at the proper time, he would have had really a model strawberry bed.

The *Boston Pine* (Hovey's) is falling in estimation here. It is a prolific, good variety, but needs good soil and first rate cultivation. When the plants grow old, and the ground nearly covered with runners, it is worthless. But it is worth good culture; and its falling off is more the fault of our cultivators than of the plant. It requires to be kept in "hills," free from runners, and in rich soil.

Burr's Rival Hudson is valued here as being very productive, and particularly good for preserving. *Burr's Ohio Mammoth* is a very large and productive variety, light colored like the *New Pine*, but of rather indifferent flavor. *Iowa*—medium size, a great bearer, and of medium flavor; plant hardy and vigorous. This is used by some as a fertilizer, and answers well for this purpose; but for this region we prefer the *Large Early Scarlet*. *Lizzie Randolph* is a large, handsome berry; plants vigorous, and bear well; but, as far as we have seen, of poor flavor and quality. *Black Prince* generally bears an excellent crop with us. Many admire its peculiar, rich, mahogany color. The flavor this season, when fully ripe, was fine. On the whole, we put this among the best sorts. We see it has figured largely at the Kentucky exhibitions. *Bishop's Orange* and *Crimson Cone* are two old varieties that always yield well, and the fruit is of good quality; size medium. *Burr's Scarlet Melting* is a medium sized, tender fruit, and an immense bearer. *Jenny's Seedling* is a large, fine variety, that we think will prove valuable.

British Queen.—This magnificent English fruit, the queen of all strawberries, does not succeed well in this country; we have not seen a good specimen this year. It is almost abandoned; but we learn from the *Horticulturist* for July, that Dr. Hull, of Newburgh, has succeeded in raising a magnificent crop—Mr. Downing says, "much the finest flavored and most beautiful large strawberries that he has seen grown in this country. The color is darker, and they appear to have attained a perfection of quality never reached in England." We would cheerfully travel from Rochester to Newburgh to see better "*British Queens*" than we have seen in England.

Our seedling *Genesee* has sustained itself well; the crop this season was the best on our grounds. We know of no other variety that shows better in the bed; the fruit is so uniform, of a fine, clear, red color, and stands well up. It must become a valuable market sort, deficient in fine flavor.

Monroe Scarlet and *Orange Prolific* are both valuable seedlings of ours, great bearers and hardy. Our neighbors, Messrs. Bissell & Hooker, have also some seedlings that promise well.

We imported, last season, some six or eight famous new English sorts, but none of them have yet produced a crop to judge from or pass an opinion upon, except the *Bicton Pine.* This is a large, beautiful, high flavored berry, exceedingly fragrant; *white,* slightly tinged with rose. It bears well, and is really a novel and interesting acquisition.

If we live till next year, we hope to be able to record successful results from *Walker's Seedling*, *Moyamensing*, *McAvoy's No.* 1 and *No.* 12, *Schneike's Hermaphrodite*, and many other native and foreign sorts that we shall have in a full bearing state.

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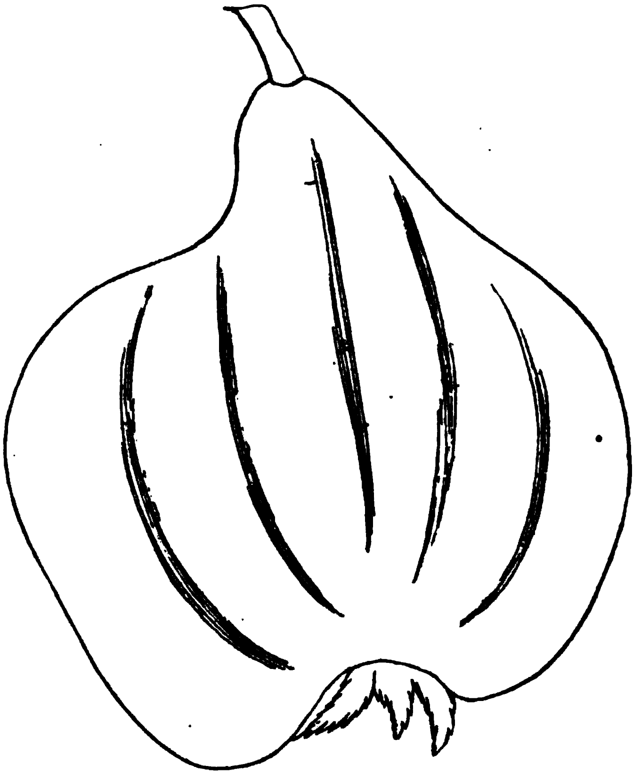
THE DIFFERENT VARIETIES OF QUINCE.

BY B. DESPORTEZ, OF ANGERS, FRANCE.

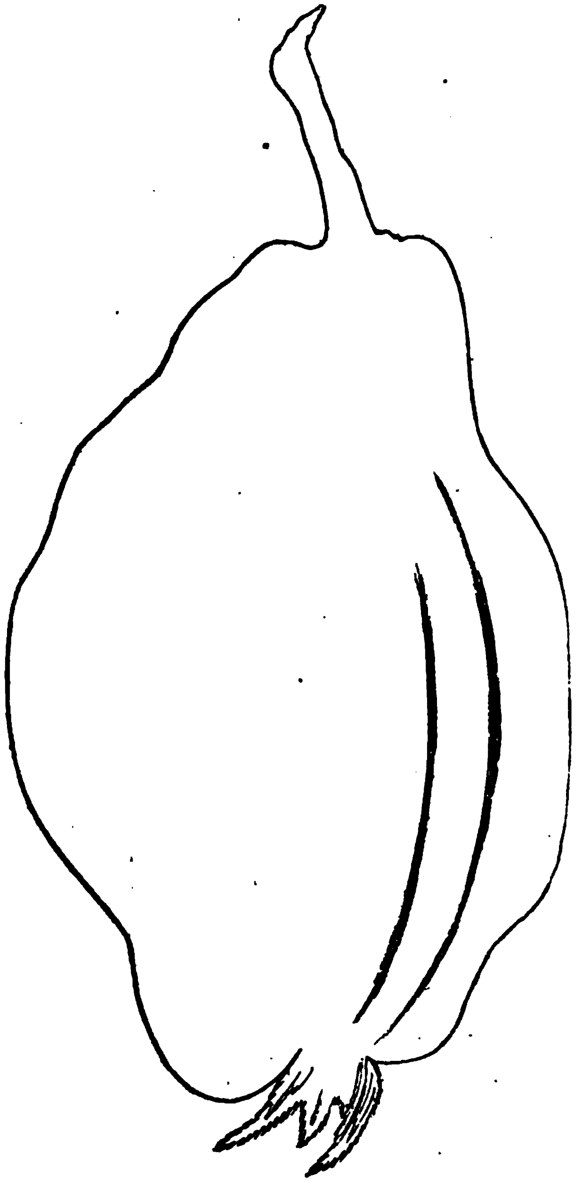
The Angers quince. (*Coignassier d'Angers,*) Fig. 1.—The nurseries of Angers have for nearly a century, been the most extensive in France, and perhaps even on the whole continent. This branch of industry (which covers in the establishment of M. Le Roy, alone nearly 200 acres of land, and occupies 100 to 125 workmen, according to the season,) has by its intelligent labors produced some races of plants peculiar to the nurseries of this region. The most important of these without doubt, and that which has contributed largely to the prosperity of this horticultural town, is the *Angers Quince.* It has been said that this species was created expressly to receive the grafts of the pear. It is so extensively propagated, that all the country around for a considerable distance is covered by nurseries occupied in greater part with this quince. It is not difficult to manage in regard to soil, and grows so rapidly that if planted in the



ANGERS QUINCE. Fig. 1.

winter, it is fit to be worked (budded) in the August following, and in two years to be sold under the form of pyramidal pear trees—*poirier en pyramide*. The quantity of it exported annually, under the form of both quince and pear, is almost incalculable, and not only holds all parts of Europe, but Africa and the two Americas, tributary to this town for its products. It is the principal branch of commerce of the nurseries; and I should say even, that it has in greater part made their fortunes and reputation.

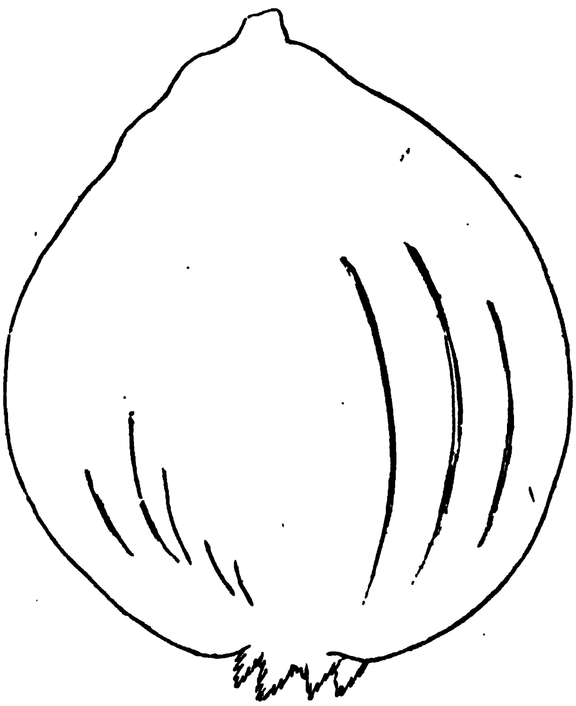
The *tree* has upright shoots when young, and few thorns or spines. The *leaf* is large. *Fruit* large, turbinate, largest in the middle, ribbed, and irregular. The *stem* is short, hard, and planted on the surface. The *eye* is large and wide; divisions of the calyx leafy and toothed; the basin of the eye is lightly ribbed or plaited. The *skin* is yellow, cottony, with some large dots of gray or black. The *flesh* is coarse and hard; juice acid, not abundant, and it has the same perfume as all the quinces. The quality is the same as the *Portugal*, and in this country it is the most fertile, and the species most commonly employed in making preserves. The *flower* is small, globular, bright rose; the petals are striped with lines of rosy carmine extending from the base to the point; the flower bud is obtuse; the ovary is small and short; the sepals are small, and furnished on the under side with small points, and slightly downy.



OBLONG QUINCE. Fig. 2.

After having made known the *Angers Quince*, a species which is worthy of being more extensively cultivated than it is at present, it may be useful to give figures and descriptions of others, from specimens grown in M. Le Roy's nurseries.

The Oblong Quince. (*Coing long ou oblong.*) Fig. 2.—*Fruit* very long and very irregular, largest in the middle, with cavities on the surface terminating abruptly toward the stem. *Eye* leafy; divisions of the calyx very long, placed in a deformed cavity. *Flesh* coarse, dry, spongy; quality *mediocre*. *Stem* obliquely inserted and very hard. Arrives at maturity in November. The *flower* is very large, much expanded; white, tinted lightly with rose; petals almost round, edges wavy, and lightly striped with rose in the interior; the flower bud is very large, largest in the middle, conical at the top; sepals long, elliptic, deeply toothed, and thickly covered with a whitish down; the ovary is large and long. The *leaf* is very large, wavy, swelled, downy underneath and smooth above; sometimes the leaves are long, elliptic, and lanceolate, at others round.



PEAR QUINCE. Fig. 3.

THE PEAR QUINCE. (*Coing poire.*) Fig. 3.—This variety is not cultivated in the nurseries at Angers, and it is with difficulty that one can procure it in this country. The only plant which I know is that in the specimen grounds of M. LE ROY. It is very common in the nurseries of other towns, particularly at Paris and Orleans, where the gardeners call it the "*Coignassier Femelle*" female quince. It is this which they use as a stock for their pears. Its vegetation is much more slow than that of the *Angers*, so that it can rarely be budded the same year it is planted. The *wood* is hard, its branches slender and twiggy. The *leaves* are small and downy. The *fruit* is large, regular although ribbed. It is of pretty good quality, and serves the same culinary purposes as the other species.

◆

NEW ROSES.

AMONG the new Hybrid Perpetual, or Remontant roses that have bloomed with us this season, are some excellent distinct varieties, that are very valuable additions to this interesting class of roses. We give the following garden notes of a few:

Baronne Hallez—Light crimson, with a carmine shade; beautifully formed; a good grower.

Caroline de Sansal—Pale flesh color; nearly as large and fine as *La Reine*; robust growth, and large foliage; decidedly the best light colored one we have yet seen.

Gen. Cavaignac—Rosy carmine; good shape.

Gen. Morangiez—Rosy pink; beautiful form and robust growth.

Eliza Balcomb—White with a fleshy tint; small, delicate, and pretty.

Pauline Buonaparte—Pure white; small; habit dwarf.

Madam Fremion—Bright rosy carmine; good shape; free growth; distinct and beautiful.

Madam Lamoriciere—Clear, transparent rose, under side of petals nearly white; perfect form; one of the very best; quite distinct.

Gen. Charngarnier—Purplish crimson; very large; habit vigorous; distinct and fine.

Madam Trudeaux—Light crimson; large, finely formed; free growth; distinct.

Pius the 9th—Deep red, with a purplish tint; large and fine; robust, and a profuse bloomer; quite distinct.

Standard of Marengo.—Brilliant crimson; a beautiful rose, but not very double.

Reine des Fleurs—Pink, with a lilac shade; perfect form; a beautiful rose.

Commandant Fournier—Rosy red; a large, bright, showy rose.

Comte de Montalivet—Purplish crimson; very large, and finely formed.

Comte Bobrinsky—Brilliant scarlet, with a carmine shade; a striking, superb rose; dwarf habit.

Poniatowski (Vibert)—Dark, purplish crimson; outside dark, almost maroon; center light; changes; distinct and beautiful.

Nothing yet surpasses or equals the *Geant des Batailles* in dazzling brilliancy, nor *La Reine* in fullness and perfect form. *Baron Prevost*, *Duc d'Amaule*, *Wm. Jesse*, *Madum Laffay*, and *Robin Hood*, are also fine yet, and likely to remain valuable for some time.

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Pinney's Orchards.—H. P. Norton, Esq., of Brockport, furnishes to the *Rural New Yorker* an account of the orchards of Austin Pinney, Esq., of Clarkson, N. Y., from which we learn that Mr. P. has now 3000 peach trees, 2600 pear trees on quince stock, 200 ditto on pear stock, making in all 5,800 trees. We know something of Mr. Pinney's zeal in fruit-culture, and with the finest land in the heart of the finest fruit-growing section of America, we do look for model orchards indeed. The splendid new railroad from Rochester to Niagara Falls runs through the village of Brockport a mile from Mr. P.'s farm, so that he is now fairly on the highway of life, and can dispatch his fruits, as they ripen, to the great markets that are anxiously awaiting them, both east and west. Success to Pinney's orchards.

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Noticing that Mr. Southworth, of Penfield, (who you will remember was awarded our Society's first premium for *Burr's New Pine* strawberry,) was bringing large quantities of strawberries daily to market, I requested him to report his success in his first attempt at raising this fine fruit. His land is of a sandy loam, and he says that the frost never throws out the roots, by which they so often perish. Last season he planted out five-eighths of an acre of the vines of *Early Scarlet*, *Hovey's Seedling*, *Burr's New Pine*, and *Alpine*. His *Scarlets* produced early and well, and his entire crop he estimated at 2000 quarts, which he sold in our market at $265. He has taken up his *Alpine*, and planted the same ground and half an acre more with *Burr's New Pine*, which he says bears double what the *Hoveys* do. Jas. H. Watts.—*Rochester, N. Y.*

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The Black Excrescences on the shoots and limbs of plum trees are now coming, and they sometimes break out on the bodies of small trees in such a way that it is difficult to remove them with the knife, without cutting away the whole tree. I have this summer had three such cases, and have cut off most of the tumor and wet the remainder with spirits turpentine. The tumor in each case has ceased to grow and has perished. In the first instance the turpentine spread a little around the sore, and destroyed the life of the bark as far as it went. I was after that careful to wet only the tumor. The sores were on trees that I set this spring. None came on trees that I have kept for a few years with the ground well manured and *salted*. I esteem them a *scroffulous* disease of the tree. S. C. Hamilton.—*Buel, N. Y.*

Ladies' Department.

CALANDRINIA.

THE ornamental species belonging to the genus Calandrinia are mostly natives of South America, and like the mignonette are shrubby plants there, though with us, and also in Europe, they are treated as annuals. The name Calandrinia was given to this genus in honor of L. CALANDRINI, an Italian botanist. We have many plants of this genus, but the only one that has yet flowered is the *Calandrinia Speciosa*, and of which the accompanying engraving is a very good representation. Few flowers have a more striking effect than this little Calandrinia, with its brilliant dark crimson flowers peeping out from its thick and beautiful bed of leaves. The flowers open in the morning, and present as rich a mass of foliage and flowers as can be desired; but by three o'clock in the afternoon every little flower is closed. With the exception of the early closing of the petals, this species deserves to be generally cultivated, as nothing can exceed the rich velvety look of the flowers. It is quite hardy, a true annual, and ripens its seeds in great abundance. It is a native of Northern California, whence its seeds were sent to England in 1832, by DOUGLAS. It should be sown in dry and exposed situations, where it can have abundance of light and heat; as the situation in which DOUGLAS found it was a hot, dry bank. It requires very little water, and flourishes best in weather when most other plants are burnt up. It is well adapted for rockwork. It may be sown two or three times during the season, and at any time from April to July.

CALANDRINIA SPECIOSA.

Calandrinia Grandiflora is another species, the flowers of which were so much larger than those of the earlier introduced, that Dr. LINDLEY gave it the name of *Grandiflora*, or large-flowered; but the name seems now inappropriate, as the flowers of *Calandrinia Discolor*, or discolored Calandrinia, are more than twice as large, and is really the finest of the species.

Editor's Table.

Trial of Implements at Geneva.—Our paper goes to press too early to permit us to give an account of this exhibition. A large number of Mowing, Reaping, and Threshing machines are entered for competition. On the first day the Mowers were tried, and the competition was very spirited. On the second day we witnessed the trial of Reapers, some eight in number. The trial was very satisfactory. The number of people assembled was not large at any one time.

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Town Agricultural Societies.—A correspondent informs us that they intend getting up a Town Agricultural Society in Naples, Ontario county, N. Y., and asks our opinion of the plan. We cordially approve of it, and think its general adoption would be attended with great benefit to the agricultural interest. Not that we wish them to supercede the County and State Agricultural Societies, but to co-operate with them. The Town Fair should be held a few weeks previous to the County and State Societies, and selections be there made of articles to be sent to the County and State exhibitions. In this way we should have individual, town, county, and—when we have our National Agricultural Show—State competition, which cannot fail to facilitate the march of agricultural improvement.

◆

Russell Comstock, the professed discoverer of "*a natural law in vegetable growth and life,*" has been delivering lectures to the farmers in Western New York, the past few weeks, at a dollar a head. An introductory lecture was delivered in this city, which was not very satisfactory, as Mr. Comstock stated that he made it a point at that lecture not to say anything that would expose his system. He, however, told some large stories—such as raising fifteen hundred bushels of potatoes on an acre by his system, which he calls *Terra culture.* The lecture was attended by many of our most intelligent gardeners and nurserymen, who put many important questions to Mr. Comstock, which he declined answering until the *next lecture.* After that *next lecture* we may give our opinion of this new discovery.

P. S. Since writing the above, Mr. Comstock has called upon us, and we learn from him that it is not his intention to divulge his secret in Rochester, until two hundred have signified their intention of attending. If this number is obtained in season, Mr. Comstock will lecture on or about the 21st of August. Mr. Comstock has been in town some six or eight weeks, and could at any time since his arrival have obtained an audience of from fifty to one hundred; and the fact that he refuses to lecture to this number, creates a little suspicion.

◆

Zinc Paint.—Oxide of lead for many years has been the main ingredient in all oil paint. This being a virulent poison, painters have always been subject to a disease called *Painters' Cholic,* the effects of this poison upon the system. We notice in a report of the Sanatory Committee of Paris, that in one year there were 302 cases in that city, of which number 12 died and one became insane. Many of the *colors* used are also poisonous, such as green from copper. M. Leclaire, a house-painter of Paris, after trying a series of experiments for four years, with a view to remedy this evil, finally succeeded in not only obtaining a white paint that is entirely harmless, but also the colors; and his paints are represented by high French authority as being more durable, as well as more beautiful than the old. His discoveries are—

1st, A pure and dazzling White—the oxyde of zinc.

2d, A gold, lemon, and straw Yellow—a preparation of the oxyde of zinc.

3d, An excellent Red, having for its base sulphate of antimony.

4th, A number of fine Greens, resulting from the oxyde of zinc and the sulphate of cobalt.

5th, A perfect drying oil, which is obtained by boiling 100 pounds of linseed oil with five pounds of per oxide of manganese.

We have examined the White Zinc Paint, at the store of M. F. Reynolds, who is the agent for this city, and for beauty and clearness it is far superior to any preparation of lead paint.

In Sussex county, N. J., large veins of zinc ore exist, and some years since an association under the name of "The New Jersey Zinc Company" was formed for manufacturing this ore into paint. The *Scientific American* says: "The Company about two years ago erected works on the Passaic river, near Newark, N. J., and manufactured white zinc paint, and various shades from a light cinnamon to a cinnabar color. The sales of the Company amount to seven tons of paint per day, and in a few years will amount to twenty tons."

JEFFERSON COUNTY FAIR.—The annual show of this Society is to be held at Watertown, on the 16th and 17th of September. In addition to the complete premium list offered, Messrs. HUNGERFORD and BRODIE give a challenge for a sweepstakes, for the best five Long Wooled ewes, not over two years old, owned in the State of New York. Their conditions are, that each intending competitor is to deposit the sum of $10 with the Secretary of the Society, on or before the first of July next. The sheep to be exhibited at the time of the next Fair at Watertown, and the Judges to be the committee appointed by the Society, on Long Wooled sheep.

They also give a challenge for a sweepstakes, for the two best fat ewes, of any age, owned in this State. Conditions same as above.

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AGRICULTURAL FAIRS.—Below we publish all the agricultural Fairs to be held this fall that have come to our knowledge. The officers of any that have been omitted will please notify us, giving time and place. Those sending notices in papers, will please mark them, or they may escape our notice.

STATE FAIRS.

New York, at Utica,	Sept.	7, 8, 9, 10
Ohio, at Cleveland,	"	15, 16, 17
Michigan, at Detroit,	"	22, 23, 24
Canada West, at Toronto,	"	21, 22, 23, 24
Vermont, at Rutland,	"	1, 2, 3
Pennsylvania	Oct.	20, 21, 22
Wisconsin, at Milwaukie,	"	6, 7, 8
New Hampshire,	"	6, 7, 8
Georgia,	"	18 to 23
Maryland, at Baltimore,	"	26, 27, 28, 29
American Pomological Congress, at Philadelphia	"	13
American Institute, at New York,	"	5
" Exhib. of Stock,	"	19, 20, 21
Rhode Island Society of Improvement, at Providence,	Sept.	15, 16, 17
New England Society for Improvement of Poultry, at Boston,	"	7, 8, 9, 10

COUNTY FAIRS.

Saratoga, at Mechanicsville,	Sept.	15, 16, 17
Rensselaer, at Troy,	"	22, 23, 24
Clinton, at Keeseville,	"	22, 23, 24
Essex,	"	20, 21, 22
Suffolk, at Huntingdon,	"	22
Otsego, at Morris,	"	22, 23
Jefferson, at Watertown,	"	16, 17
Cortland,	"	15, 16
Greene, at Cairo,	"	21, 22
Columbia, at Chatham 4 Corners,	"	29, 30
Madison, at Eaton,	"	22, 23
Wayne, at Wolcott,	"	21, 22
do. at Palmyra,	"	28, 29
Rensselaer, at Troy,	"	22, 23, 24
Herkimer, at Herkimer,	"	28, 29
Ontario, at Canandaigua,	"	29, 30
Monroe, at Rochester,	"	29, 30
Wyoming, at Warsaw,	"	22, 23
Seneca, at Waterloo,	Oct.	14, 15
Genesee,	"	6, 7
Cayuga, at Auburn,	"	6, 7
Putnam, at Carmel,	"	5, 6
Richmond,	"	17

TOWN FAIRS.

East Bloomfield,	Sept.	22
Brookfield, Madison county,	"	29, 30
Cape Vincent, Jefferson county,	"	15

THE JOURNAL OF THE U. S. AGRICULTURAL SOCIETY.—The Executive Committee of the U. S. Agricultural Society voted $200 to get out the first number of the Journal, in which is contained an account of the doings of the National Agricultural Convention, and such other matter as may be deemed appropriate, and useful to the farming community. This work, which is expected to be issued quarterly, is placed in charge of DANIEL LEE, who is somewhat known to the readers of the *Genesee Farmer*. We can only say that the best talent in all the States is pledged to aid, hereafter, in making "The Journal of the United States Society" an honor to the first agricultural nation on the globe; and that such as desire to join the Society, and participate in the advantages which it offers, can do so by sending two dollars to WILLIAM SELDEN, Esq., Washington, D. C., Treasurer of the Society, or to DANIEL LEE, its Corresponding Secretary, who will see that all names are duly entered, and that the Journal, seeds, &c., are properly mailed. The first number of the Journal will be published in this month, (August,) and contain 144 pages.

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IT will be seen by Mr. DORR's advertisement, that he has changed the time and place of the sale of his Morgan colts.

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ADVERTISEMENTS, to secure insertion in the Farmer, must be received as *early* as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance.*

◆

Inquiries and Answers.

CULTIVATION OF CELERY.—I find myself compelled to ask your counsel in regard to raising celery. I understand something about it theoretically, but wish to learn through the *Farmer* the whole practical part, from sowing till it is ready for the table, after which I can manage it. I have already trenched some, though I do not see how I can economically blanch it. Please teach me all you conveniently can in regard to it. CHARLES BRACKET.—*Rochester, Ind.*

Celery seed should be sown as early in the spring as the weather will admit. If sown in a hot-bed and transplanted when an inch and a half or two inches high into a bed in the open air, to strengthen, so much the better. Let them remain in this bed till four or five inches high, when they must be transplanted into trenches. The trenches should be dug about eighteen inches deep and four feet apart. Place some *well rotted*, rich manure about six inches thick at the bottom of the trench, and on the top of this some five or six inches of very rich surface soil or compost. In the trench thus prepared, carefully transplant the celery plants about six inches apart, with as much earth remaining round the roots as possible; water them well for a few days; and if the weather is very hot, it will be necessary to shade them till they have taken firm root. They grow but slowly at first. Loosen the soil around them occasionally, and as they grow they must be earthed up. In doing this, be careful that the soil does not get between the leaves; take the leaves of the plant in one hand, and place the soil around it with the other to within a few inches of the top. Repeat the operation every week or so, as the plants grow, and you will have a crop of celery that will well repay all the labor. Before winter sets in, take it up and place it in the cellar with a little earth at the roots, and you can have celery until spring.

◆

Smut in Wheat.—I wish to make a few inquiries in regard to a subject very important to the farmers of this section of Kentucky. The wheat crop of this whole region is very much affected by a disease called the smut—a disease entirely new to this part of the country—the oldest inhabitants not having seen it before.

For fear there may be some misapprehension as regards the true affection, I will attempt a description of it as it appears here. There are no very marked differences in the heads of wheat until a few days before ripening; then the diseased heads appear more full and dark than the sound, and the capsules are in some instances filled with a dark grumous mass, and in others with a dark, impalpable powder, and emitting a most offensive and disgusting odor.

Can you, or some of your contributors, inform us in regard to it's cure or prevention; and whether the disease is influenced by a wet or dry season; and also whether the disease is communicated when the grain is forming, or may it be produced (as some suppose) in sound wheat merely by bringing the smutted wheat in contact with it; or, in other words, whether wheat perfectly sound would another year be diseased by having come in contact with smutted heads now? All the information you can give us upon this subject, through the columns of your valuable and widely circulated journal, will be thankfully received by a subscriber B. S. Owen.—*Wilsonville, Ky.*

Few subjects connected with agriculture have been more discussed than that of smut in wheat; innumerable theories have been advanced to account for the cause, and as many remedies proposed for its prevention. Of these we can not now speak; our correspondent will find the matter discussed at full length in the Farmer of 1850. Whatever may be the cause, it is pretty certain that the prevention is easy and effectual in several ways. We know of nothing more simple and efficacious than to wet the wheat seed before sowing with a solution of salt and water, and drying it with caustic lime. The solution should be made so that an egg will just swim in it, and the seed be well wetted and limed *immediately previous to sowing;* for if it is left for many hours in a heap or in bags, it often heats, and the germinating principle is weakened or destroyed. Instead of salt and water, chamber lye is frequently used, and is, in our opinion, preferable.

When to Sow Grass Seed.—I have been a subscriber to the *Farmer* for two years, and have carefully examined it to find some statement in regard to sowing grass seed, but have not been able to learn anything in regard to it. When is the best time to sow it—in the spring or fall? D. S. Chase.—*Tekonsha, Mich.*

For permanent meadow, and on dry land, we should prefer to sow timothy seed in September, with the wheat, previous to the last dragging. The plant acquires a strong, vigorous growth during the fall, and will generally stand the winter, yielding a heavier crop of hay the first season than if sown in the spring, though it sometimes injures the wheat crop on land naturally inclined to grass.

If timothy alone is sown, from half a bushel to a bushel of seed per acre is necessary, according to the soil—clays requiring much more seed than rich, mellow loams. It is sometimes sown *alone* in August or September, and in this way a good crop of grass is often obtained the following summer.

Except in rare cases, we would never sow timothy on good wheat land, as a rotation crop; for being a cereal, it exhausts the soil of the same elements as wheat, and our wheat soils are not now any too rich, even under the best management. If timothy must be grown, let it be on land not well adapted to wheat; and on such soils it must be sown in the sping, as it is apt to winter-kill on low, alluvial land.

◆

Cooking Food for Hogs.—I wish to make a few inquiries in regard to the feeding of swine, &c. Will a given amount of food produce a greater amount of pork if fed warm than if fed cold? It is the opinion of many old farmers in this vicinity that it will, especially if fed in winter. Will science bear them out in this opinion? They usually scald their Indian meal by the use of boiling water. Is this cooking it sufficiently? S. Carter, Jr.—*Amherst, New Hampshire.*

We have never made a satisfactory experiment on feeding hogs with cooked and uncooked corn meal, but have done so with barley meal and potatoes fed raw or uncooked, and with the potatoes steamed till they would beat to a pulp, and the barley meal mashed with them as soon as the potatoes were taken from the steamer. The result was decidedly in favor of the cooked food; so much so, that the plan was ever afterwards adopted, the extra increase of the hogs much more than covering the expense of cooking. The experiment was during the winter months, with six hogs in each stye.

◆

Boxes for Feeding Cattle, &c.—I wish to make some boxes, from which my cattle may eat hay, straw, cornstalks, &c. What should be the form, size, &c.? Also some racks for sheep. What is the best form? Should the slats be far enough apart to allow them to pass their heads through? Cyrus Bainbridge.—*Romulus, N. Y.*

Will some of our experienced correspondents give their views on this subject!

HORTICULTURAL.

(D. E. G., Haviland Hollow, N. Y.) It makes no matter whether you take buds from dwarf trees or standards, or whether on quince or pear stocks, provided always the trees be in perfect health and vigor; this is the main consideration.

◆

How will the plum succeed grafted on the peach? S. Carter, Jr.—*Amherst, N. H.*

Some varieties do well; but they must be in a light, dry soil.

◆

Mr. Barry will confer a favor upon many of your subscribers, by stating in his department at what season it is best to transplant evergreens. N. W. T.

If from the nursery, any time in April or May; but if from the woods, about the time they are starting to grow.

◆

Is the fall season as good as the spring for planting out fruit trees? And what month in the fall? Chas. H. Morrison.—*Oxford, Ia.*

For hardy trees, we prefer the fall, as soon as a sharp frost has completely arrested vegetation. In Western New York, about the 10th or 15th of October, and for a month after.

◆

I write to ask of you the kindness of letting us know through your columns, which is the very best work, in your knowledge, upon rural homes, giving also the address. We have heard of *Downing's Horticulturist;* if it is the best, please acquaint us with its address and terms.

Our situation will be on the edge of one of the many rich and beautiful prairies of Southern Illinois, overlooking an extensive undulating plain, bedecked the greater part of the season with sylvan groves and innumerable flowers. We wish to fix upon the plan for our yard, flower garden, fruit garden and orchard, the coming fall, and also for a nursery of evergreens and fruit trees; therefore we should like to be examining some excellent work upon this subject as soon as possible. We would of course wish one devoted almost exclusively to horticulture, as we have yours for agriculture, and one not lacking in engravings of sweet homes nestling in nature's green lap. E. J. Cope.—*Fairfield, Ill.*

Three good works for you—*Downing's Landscape Gardening, Wheeler's Rural Homes, Barry's Fruit Garden.*

◆

Will you please to give me some information, if you have had any experience in tarring young fruit trees in the fall or beginning of winter, in order to protect them from the mice? If you have never experimented upon it, give your opinion as to its efficacy, and whether it will injure the trees or not. If it is a sure preventive, as I have heard it rumored, it will be one of the greatest blessings of the day to nurserymen and farmers. A. C. HALL.—*Marcy, Oneida Co., N. Y.*

We have had no experience with tar for this purpose, and should not advise its use. *Clean culture* around orchards is of great importance, and mice may be pretty effectually kept off by throwing up a small mound of earth around each tree, say a foot high, to be levelled down in the spring.

Emery & Co.'s Improved Horse Powers, Threshers, and Seperators.

THE undersigned have been appointed sole agents for the sale of Emery's new Patent Improved Horse-Powers Threshers, and Separators, in the city of New York. The State Agricultural Warehouse is the only depot where this superior Power can be had.

LONGETT & GRIFFING,
7-tf. State Ag. Warehouse, 25 Cliff st., New York.

The Water Cure Journal.

A NEW VOLUME commences with the present July number. Published monthly. Illustrated with engravings exhibiting the structure, anatomy, and physiology of the human body, with familiar instructions to learners. It is emphatically a Journal of Health, designed to be a complete Family Guide in all diseases.

Terms.—Only One Dollar a Year, in advance. Please address, post paid, FOWLERS AND WELLS, No. 131 Nassau street, New York.

A few brief Editorial Notices may be acceptable to those unacquainted with the Journal. We copy:

From the New York Tribune.

"The Water Cure Journal holds a high rank in the science of health; always ready, straight-forward, and plain-spoken, it unfolds the law of our physical nature, without any pretensions to the technicalities of science, but in a form as attractive and refreshing as the sparkling element of which it treats."

From the Fountain Journal.

"Every man, woman, and child, who loves health, who desires happiness, its direct result, who wants to 'live while it does live,' 'live till he dies,' and really live, instead of being a mere walking corpse, should become at once a reader of this Journal, and practice its precepts."

From the New York Evening Post.

"The Water Cure Journal.—This is, unquestionably, the most popular health Journal in the world."

This Hydropathic Journal now enters upon its Fourteenth Volume, with a circulation of Fifty Thousand Copies. The ablest medical writers are among its contributors, and all subjects relating to the Laws of Life, Health, and Happiness, may be found in its pages. Now is the time to subscribe. [8-2t]

Hallock's Agricultural Warehouse,

No. 50. State St., Rochester, N. Y.

THE Subscriber, late from the Agricultural Works, Warehouse, and Seed Store of Messrs. Emery & Co., Albany, (where he has been engaged for the past six years,) has been induced to establish an Agency for the sale of their justly celebrated Premium Horse Powers, Threshers, Separators, &c., in Rochester. Particular attention will be paid to selling and putting up the Horse Powers, and other fixtures for threshing, &c. A thorough knowledge of these machines enables him to put them up more satisfactorily than has been done heretofore. Price and terms same as at Albany, transportation added.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in Rochester, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public.

E. D. HALLOCK.

July, 1852.

Spanish and French Merino Sheep.

THE subscriber has on hand, and for sale, pure bred Spanish Merino bucks and ewes that are one year old, and one French buck three years old, and lambs that are half French and half Spanish, both bucks and ewes, that were sired by my imported buck that took the first premium at the State Fair at Rochester, in Sept., 1851.

REED BURRITT.

Burdett, Tomp. Co., N. Y., Aug., 1852.—8-1t*

Great Sale of Superior Thorough-bred Short-Horn Cattle.

THE subscriber will offer for sale his entire herd of choice Short-Horns, comprising 50 head, young and old, at public auction, on Wednesday, the 18th of October, 1852, at 1 o'clock P. M., at his farm, 2½ miles from the city of Troy; reserving to himself one bid on 5 cows and heifers and one bull, say six head in all, and these to be pointed out previous to the commencement of the sale. This bid will be made public when the six animals are brought to the stand for sale. Should any gentlemen advance on the single bid made by the proprietor, the highest bidder will be entitled to the animal. It is proper to say, the severe drouth in this vicinity reducing the hay crop one half, has decided the proprietor to make this sale at the time named, instead of next June, which he had purposed to do.

The well established reputation of this herd in this Union, and in Canada, and the splendid herd it has measurably sprung from, viz: the famed herd of that eminent English breeder, the late Thomas Bates, Esq., renders it hardly necessary to comment upon its superior merits. It may not however be inappropriate to remark, that the establishment of this herd was commenced in 1888, and that the most careful attention has since been paid to its breeding, and that it now contains mostly all the reserved stock of two former public sales. Since 1840, the proprietor has imported from the late Mr. Bates, and his friends and late tenants the Messrs. Bell's, 7 head of Short-Horns. And besides these, he has now on the passage across the Atlantic, shipped 21st June, on board the packet ship Kossuth, Capt. Jas. B. Bell, a superior yearling roan bull, having many crosses of the famed Duchess bulls of Mr. Bates. Including this latter animal and the two beautiful red roan 8 year old heifers which came out from England last September, "Yarm Lass" and "Yorkshire Countess" and the beautiful heifer calf of the latter animal, got in England by the Duchess bull "5th Duke of York," there will be 14 head of this imported stock, and its immediate descendents. There has been sold from this herd but 8 heifers from these importations, and these cows were sold at $800 each. All the young bulls bred from these cows, except those now offered for sale, have also been sold at private sale, at $800 each, most of them while quite young.

Besides these 14 head of high bred animals, the noble premium cow "Esterville 3d," bred by E. P. Prentice, Esq., of Albany, and her equally fine 2 year old, red and white heifer bred by me, got by the Bates bull "Meteor," and 8 of the famed milking Willey tribe, the same tribe of cows as the heifer "Ruby," sold by me to Mr. S. P. Chapman, of Madison county, and which cow was awarded the first premium by the N. Y. State Ag. Society, for producing the largest quantity of butter in ten days in June and ten days in August, on grass pasture only, being a fraction over 40 lbs. in those 20 days. There are other valuable tribes in the herd, as the printed catalogue will show.

The catalogue will be ready for distribution about the 1st of August, and will exhibit richness of pedigrees rarely to be met with, showing the descent of the most of the animals from the best animals on record in the English herd book. Having received an invitation from H. Strafford, last winter, to forward a list of the pedigrees of my herd, to be inserted in the forthcoming volumes of the English herd book of which Mr. Strafford is now the editor, several pedigrees were sent to him of the animals here offered for sale, and will appear in said book. Gentlemen are invited to examine the herd at any time.

A credit of 9 months will be given on all sums up to $800, and 9 and 18 months on all sums over $800, for approved paper, with interest, payable at some bank in this State.

Troy, N. Y., August, 1852.—8-3t. GEO. VAIL.

Albany Tile Works,

No. 60 Lancaster St., West of Medical College.

THE subscriber has now on hand, and is prepared to furnish to Agriculturists, Horse-Shoe and Sole Tile, for land drainage, of the most approved patterns. They are over 1 foot in length, 2½ to 4½ inches calibre, from $12 to $18 per 1000 pieces—being the cheapest and most durable article used. Orders from a distance will receive prompt attention. [4-6t] JOHN GOTT, Jr.

Mansfield's Clover Seed Hulling and Cleaning Machine

WAS awarded, at the Ohio State Fairs 1850 and 1851, the first premiums, Diploma and Silver Medal. Warranted to hull and clean from 20 to 40 bushels seed per day, or from two to five bushels per hour. Cash price of machine $95. Manufactured and for sale by M. H. MANSFIELD,

August. 1852.—8-2t* Ashland, Ohio.

Agricultural Implements & Machinery, Seeds, Fertilizers, &c.

FARMERS Planters, and Merchants, will find at the Agricultural Warehouse of A. B. Allen & Co., 189 and 191 Water street, New York, the largest assortment in the United States, of tools and machines, suited to every soil. Most of the implements sold by them are manufactured in their own machine shop, under the direct supervision of one of the firm, where the best of seasoned timber only is used, with iron of the first quality.

Plows.—Of plows they sell more than 100 different patterns, among which are double moldboard, or fluke plows, self-sharpening, subsoil, and side-hill plows.

Plow Castings of various patterns, among which are bull tongue, scooter, scrapers and shovels, by the ton or retail.

Harrows, Cultivators, Cotton Sweeps, Corn Planters, Hoes, Shovels, Spades, and Forks, of various patterns, in any quantity.

Straw Cutters and Corn Shellers, manufactured with much care, extra strong.

Sugar Mills, Rice Hullers, Cotton Gins, Threshing Machines for wheat and oats and rice, Fanning Mills for do. Wheat and Corn Mills, with burr stones or iron plate.

Horse Powers of various patterns, suitable for one to eight horses.

Reaping and Mowing Machines, Sowing Machines, Grain Cradles, Scythes and Rakes. Every kind of Horticultural Tools; also,

Garden and Field Seeds, Fruit and Ornamental Trees, sent to order.

Improved Stock.—Durham, Devon, and other cattle; Cotswold, Leicester, Southdown, Merino, and Saxon sheep; Suffolk, Lincoln, and Berkshire swine.

A descriptive, pictorial catalogue of over 100 pages will be given, on application from customers, or sent to them by mail on their enclosing four letter stamps, to prepay postage, as required by the present post-office law.

N. B. Genuine Peruvian Guano, Bonedust, &c.

THE PLOW,

A MONTHLY

PLANTERS' AND FARMERS' JOURNAL,

EDITED BY

SOLON ROBINSON,

is now published in place of the American Agriculturist, at Fifty Cents a Year. Editor's office at the New York Agricultural Warehouse. Specimen numbers will be forwarded, on application, to our correspondents.

A. B. ALLEN & CO.,
189 and 191 Water street, New York.

$1000 CHALLENGE.

I OFFER to place one thousand dollars cash in the hands of a party chosen, against one thousand to be paid into the hands of the same party by any manufacturer of Threshers in the United States, if a machine can be found that will thresh and clean fit for market or seed, with the aid of *only two horses*, 100 bushels of wheat and rye in less time than I can with my "Excelsior Wrought Iron Cylindrical Thresher and Cleaner." The grain to be thoroughly threshed, without white caps, or broken, and the straw delivered long enough to stack, and free from chaff. The winner to receive the $2000 with both machines and powers. For circulars, address Joseph G. Gilbert, 216 Pearl street, New York.

Emery and Co.'s advertisement in April number of Cultivator, with plates, termed by them "Emery's Improved Patent Rack and Pinion Power." I believe to be a direct infringement on "Urmy's Patent," and as attorney for Mr. Urmy I warn all who make or purchase a machine infringing on such patent, that they will be dealt with according to law. These powers can be procured from me only, at less prices than any other good railway power.

Gilbert's Patent Portable Excelsior Wrought Iron Thresher and Cleaner will thresh and clean grain fit for market at the rate of one-half to three-fourths of a bushel per minute, with two horses.

Urmy's Patent Railroad Power is the most durable and the cheapest power to be obtained.

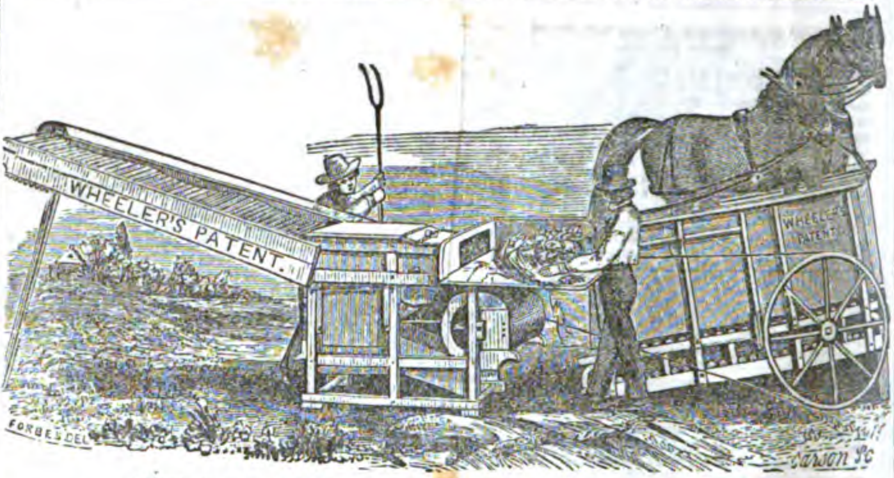
Urmy's Double-geared Lever Power, for 2 to 8 horses.

Urmy's Patent Cornstalk Cutter and Grinder.

Urmy's Patent Seed Drill. Over 2000 of these machines have been sold, and have given general satisfaction.—County rights for sale for $100 and upwards, and castings furnished to manufacture at cost prices. Profits 100 per cent. For particulars, address, post paid,

J. G. GILBERT,

August, 1852.—8-1t*$2. 216 Pearl street, New York.



NEW YORK STATE
AGRICULTURAL WORKS,
ALBANY, N. Y.,
By Wheeler, Melick, & Co.

THE subscribers, in order to meet the rapidly increasing demand for their Horse-Powers and Threshers, and combined Threshers and Winnowers, and other machines, have recently added to their manufactory a commodious Furnace, so that every article of importance used in the construction of their machines, is now made under their immediate inspection. They are thus enabled to assure their customers that their work is of the most perfect character, both in workmanship and in the quality of the materials used; and in this respect, as well as in all other desirable qualities, they invite comparison of their agricultural machines with any others in the world.

Among the articles we make, are—

Wheeler's Patent Railway Chain Horse-Power, and Overshot Thresher and Separator, for either one or two horses.

Wheeler's Patent Combined Thresher and Winnower, worked by only two horses.

Wheeler's Clover Huller, Straw and Stalk Cutter, Circular Saw-Mills, Horse Powers geered for churning in large dairies, &c., &c.

With the exception of the Combined Thresher and Winnower, (which is a new invention of last year,) our machines are so widely known as to need no commendation. It is sufficient to say that every article made by us is *warranted to give satisfaction*, or it may be returned after a reasonable trial.

THE COMBINED THRESHER AND WINNOWER

was introduced into the market toward the close of last season, and is in exceeding high favor. We entertain no doubt that it is the most perfect, compact, and efficient machine now in use for threshing and winnowing grain, and it certainly is far the cheapest and most economical.

In our former advertisements in the April and May numbers of this journal, we gave numerous letters from persons who, having used the Winnower, express the highest approbation of its merits. Since then we have received other testimonials of its excellence from gentlemen in different States of the Union, but we have space for only the two following:

From T. Waters, Esq., of Shop Spring, Tenn., dated June 24, 1852.

"Messrs. WHEELER, MELICK, & Co.—I have just returned from W. T. Waters, whose Thresher and Winnower was put in operation this morning. He is as well pleased with it as he anticipated. He can dispose of it at cost, and thinks he will do so, and order another machine from you. My own machine has not arrived."

From W. D. Bacon, of Wisconsin, dated July 2, 1852.

"Messrs. WHEELER, MELICK, & Co.—I am using to-day the Thresher and Winnower you sent me, and it far exceeds my expectations in the perfect manner in which it performs its work. I have had several gentlemen witness its operation, and all concur that it is an extra machine."

We could add others equally flattering if space permitted.

☞ Price of Double Power, with Combined Thresher and Winnower,	$225
Price of Thresher and Winnower without Power,	115

DOUBLE POWER AND OVERSHOT THRESHER AND SEPARATOR.

The superiority of Wheeler's Patent Railway Chain Horse-Power, and Overshot Thresher and Separator is universally acknowledged. Thousands of them are in use, many of which have threshed from 50,000 to 100,000 bushels of grain, and are still in good condition. Probably more than four times as many of these machines were sold during last year as of any other kind. They are beyond doubt the most durable and economical machine in use. Their capacity has been tested by repeated trials as well at the New York and Pennsylvania Fairs as on several private occasions in competition with another machine made in this city which has been advertised to be far superior to ours, and in every instance the result has been about one-*third* and in some instances more in favor of our machines. In every case except one, where we have submitted our machine to a *working* test at Fairs, it has taken the highest premiums; and in that excepted case the committee decided that our machine performed its work in 8 minutes and its competitor in 11¾ minutes, being nearly one-third in favor of ours.

We have also exhibited ours in competition with the same machine at the State Fairs in Ohio, Michigan, and Pennsylvania, and also at the Provincial Fair in Upper Canada, at all of which we received the highest premiums, viz: In Ohio, a Silver Medal and Diploma; in Michigan, $20; in Pennsylvania, $10; and in Canada, a Diploma.

We have numerous similar testimonials from county Societies, where we have always received the highest premiums awarded to Chain Powers.

Price of One Horse Power, Thresher, Separator, and Belting,	$120
Two Horse do.,	145

SINGLE HORSE POWER AND THRESHER AND SEPARATOR.

This machine is well adapted to the use of farmers raising an ordinary quantity of grain; with two or three hands it is capable of threshing from 60 to 100 bushels of Wheat per day, or twice that quantity of Oats. The same power is also used for churning and for driving Circular and Cross Cut Saws, Cutting Feed, driving Grindstones, elevating Grain, pumping, &c.

Price of Power geared for churning and driving Cross Cut Saw and for Threshing, &c.,	$90
Belt for driving Thresher, &c.,	5
Thresher and Separator,	35

SINGLE HORSE POWER AND CHURNING MACHINE.

This machine has been extensively used in large dairies and with the most satisfactory results. The power is found to be peculiarly adapted to churning, the propelling force being produced by the weight of the horse to an amount sufficient to drive 4 or 5 barrel churns. The motion is varied by altering the elevation of the power so as to produce all the changes in speed required in the different stages of the process of churning. This is done by means of a lever and without stopping the horse, so that the motion is always under the control of the person in charge. The power is the same as that made by us for threshing, &c.

WHEELER'S FEED CUTTER.

This machine is made expressly for Horse Power use, and is very strong and substantial. It cuts not only corn stalks, but hay and straw with equal facility, and does its work with great rapidity. Price, $28.

LAWRENCE'S SAW-MILL.

This mill is much used on railways, for sawing wood for locomotives, as well as by farmers, for cutting stove fuel. With a one horse power it will cut from 10 to 15 cords of wood twice in two per day. Price, (with 24 inch saw,) $35.

WHEELER'S CLOVER HULLER.

This machine is compact, simple and durable. It does its work perfectly without injuring the seed, and is capable of hulling from 5 to 15 bushels of clover seed per day, with one horse. Price, $28.

TROJAN PLOW.

The subscribers are also the sole agents in Albany for the sale of the celebrated "*Trojan Plow*," made by N. B. Starbuck, of Troy. These plows are doubtless superior to any other kind in use, and will be sold by us at the manufacturer's prices.

☞ All machines made and sold by us are *warranted to give satisfaction*, or they may be returned after a reasonable time for trial. Orders are solicited and will be promptly filled.

WHEELER, MELICK, & CO.,
Corners of Hamilton, Liberty, and Pruyn streets,
(Near the Steamboat Landing,) Albany, N. Y.
August, 1852.

The subscribers have obtained from Messrs. Wheeler, Melick, & Co., of Albany, the exclusive sale in Rochester, and general agency in Western New York, of their celebrated Agricultural Machines, which we will sell at their Albany prices, adding transportation.

J. RAPALJE & CO.

Field Seeds.

AUSTRALIAN WHEAT—very superior. The berry of this grain is extra large, and makes the best of flour. It produces a greater average crop than any other variety now grown in New York. Several years' experience in its cultivation, proves that it is less liable to rust or mildew than other kinds; and as the stalk is large and strong, it is also less liable to blow down or lodge. Price, $4 per bushel. Other varieties of wheat, such as the White Flint, Mediterranean, Black Sea, &c.

BUCKWHEAT, of the best kinds in market.

RUTA BAGA, or Swedish Turnep Seed. The Purple Top and other superior varieties.

TURNEP SEED—Large White Flat, Long White, Red Top Flat, Yellow Aberdeen, Yellow Stone, and other improved kinds for the field or garden.

A. B. ALLEN & CO.,
June, 1852.—6-tf. 189 & 191 Water st., New York.

Improved Subsoil Plows.

THE subscribers offer for sale an Improved Subsoil Plow, made under the advisement of Prof. J. J. Mapes, and free from the objections urged against those formerly in use. The wearing parts are so arranged that they may be easily and cheaply renewed, while the amount of force requisite to move them is less than half that required by those previously made.

Price—One Horse Plow, $5; with draft rod, $6. No. , with draft rods, $8.50. No. 2, do., $11.

LONGETT & GRIFFING,
June, 1852.—6-3t. No. 25 Cliff street, New York.

Northern N. Y. Live Stock Insurance Company, Plattsburgh, N. Y. For terms, please apply to agents of the Company.

GREAT SALE OF BLOOD CATTLE.

ON Wednesday, the 18th of August next, I will sell the chief part of my large herd of Blood Cattle—chiefly cows, heifers, and heifer and bull calves—comprising upwards of fifty full-bred Short-Horns.

Also, eight thorough-bred Herefords—a two years old bull, a yearling bull, three cows, and three calves. One of the Hereford cows ("Rarity") was imported from England by Messrs. Corning & Sotham, in 1841. The others, excepting the two years old bull, are her descendents, by bulls of the same stock.

Also, two or three Devon bull calves, got by Mr. Ambrose Stevens' imported bull "Candy," bred by the distinguished Mr. Quarity, of Devonshire, England, and out of cows descended from the herd of the late Earl of Leicester.

The remainder of the cows and calves, forty to fifty in number, are high-bred Short-Horn grades, with a dash of Devon blood in some of them.

The calves of the thorough-bred Short-Horns and grade cows, are mostly got by the imported Short-Horn bull "Duke of Exeter," (10,152,) of the celebrated "Princess tribe," bred by Mr. John Stephenson, of Durham, England, whose herd is excelled by none, if equalled, by any now in England.

All the Short-Horn and grade cows and heifers which come in season, will be bulled, previous to the sale, by "Duke of Exeter."

Many of the cows, both thorough-bred and grade, are descended from the Bates bulls "Duke of Wellington," imported by George Vail, Esq., of Troy, N. Y.; and by "Symmetry," son of "Wellington," out of Mr. Vail's imported Bates cow "Duchess."

This stock has been bred with a strict regard to their milking quality, in which they have been fully *proved*, and are not excelled by any herd of cows in the United States. They are all gentle, with fine silky udders, milk easy, and are animals that will be satisfactory to any one in want of the best breeding and milking stock.

The sale will take place at the residence of Peter Gurbrane, two miles above Albany, on the Troy road, on the homestead farm of Gen. Van Rensselaer, where the cattle will be for a week before the sale.

Catalogues with pedigrees will be prepared by the 15th of June, and sent by mail to all post-paid applicants.

I will also sell at the same time, two pairs of six years old thorough-bred Short-Horn oxen, and two or three pairs of matched steers.

Also, ten or twelve South-Down buck lambs, got by an imported ram, from the unrivalled flock of Jonas Webb, of Babraham, England, and from Ewes descended from the flocks of Mr. Webb, and Mr. Ellman of Sussex.

LEWIS F. ALLEN.
Black Rock, N. Y., May, 1852.—6-3t*

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no further preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

Real Estate for Sale.

THE health of the subscriber having failed him, he is induced to offer for sale his Mill property, consisting of a custom Mill, recently put in a good state of repair; a Saw Mill, also recently repaired; two Dwelling Houses; a good Orchard, and about 22 acres of land, including flowage land. Said property is situated in the pleasant town of Yates, Orleans Co., N. Y., in the midst of a wealthy farming community and an excellent wheat growing country.

He has also a farm of 154 acres of first quality land adjoining said Mills, 120 acres improved, good buildings, orchards, and plenty of running water. He will sell said farm with the Mills, if desired.

Inquire of the subscriber, on the premises.

[7-3t] J. C. PARSONS.

Prices of Agricultural Products at the Principal Markets in the United States. — July 21, 1852.

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Philadelphia.	
Beef, per 100 lbs....		a $7.50		a $7.25	$5.50	a 6.00						
do mess, per bbl..	15.00	18.00	17.00	16.00	10.00	10.50					$18.00 a 19.00	
Pork, per 100 lbs....					7.00	4.50						
do mess, per bbl.	18.50	19.50	19.00	22.00	16.00	19.00	$16.50 a 17.00			$20.00	19.75	20.00
Lard, per lb.........	10	11½	11½	12½	9	10	9	9½	8	a 10½	10	11½
Butter, do	12½	21	15	28	12½		8	10	9	12	12	14
Cheese, do	6½	8	7	8½	6	7	5	6		6		
Flour, per bbl.......	1.00	5.87½	4.12	5.75	4.75	5.00	2.75	3.50	3.18	3.85	4.12½	5.00
Wheat, per bush....	90	1.12	90	1.05	96	1.00			62	64	95	1.08
Corn, shelled, per bu.	62	62½	57	66	54	56	31	36	31	33		64
Rye, do		79½	80	82	69	70			47	50	81	83
Oats, do	40	44½	44	47	44	41	23	24½	24½	26	43	46
Barley, do	58	62			6[illegible]	70			25	40		
Clover seed, do	7½ a 8 pr. lb.		8 a 11 per lb.		[illegible]	5.50			3.75	4.00	4.87½	5.00
Timothy seed, do	$14 a 16 per tce.		2.50	2.75	2.2[illegible]	3.00		2.25	1.50	2.50		
Flax seed, do	1.20	1.30	1.33	1.35	1.2[illegible]	1.50		1.00		1.00		1.25
Hay, per ton.........	16.00	20.00	14.00	15.00	8.[illegible]	12.00			6.50	12.00		
Wool, per lb........	31	[illegible]		50	3[illegible]	40	23	36	26	37	34	50
Wood, hard, per cord			5.00	6.50	4.[illegible]	4.50						

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Valuable Virginia Land for Sale.

I OFFER for sale between 700 and 800 acres of land, handsomely located in Prince George county, Va., lying immediately on Chipoaks creek, adjoining Lower Brandon plantation on the south, 25 miles from Petersburg. About 200 acres are cleared, and the balance tolerably well timbered with oak and pine. The cleared land was marled several years ago, and 1000 bushels of marl with 1500 bushels of lime have been recently applied to it.

The improvements are, a good brick house with five rooms, (from which there is a beautiful prospect of James river,) a kitchen, stable, smoke-house, a barn with stationary horse-power attached, and a well of good water. The buildings are within 300 yards of the main landing, where vessels load with produce, wood, &c., and unload lime at 7 cts. per bushel. Marl abounds on the opposite side of the creek. The whole tract is well watered by springs and brooks, that run through fine meadow lands, a part of which are cleared.

I will sell it entire, or in parcels to suit purchasers, as it can be advantageously divided into four farms. If not sold privately (of which due notice will be given) before the 30th day of September next, I will sell it upon the premises, on that day, at public auction, without reserve.

Persons wishing to view the property will leave the Richmond and Norfolk boat at Lower Brandon Wharf, on James River, three miles from the property; or I will give any information to those addressing me (post-paid) at Cabin Point P. O., Surry County, Va.

August, 1852.—3-2t. E. T. FETTER.

Splendid Horses for Sale at Auction.

"We refer those who are critical in the matter of horseflesh to the advertisement of J. Dorr, Esq., of Scottsville, by which it will be seen that his fine Morgan colts are offered for sale. Such an opportunity to purchase seldom occurs. Both the breed and these individual specimens are among the most desirable in the country."—*Rochester Daily American, July 2*, 1852.

See advertisement on page 232 (July number.) Sale to be August 25, at 3 P. M., in front of J. P. Fogg's seed store, Rochester, instead of 18th, at Scottsville, as before advertised. J. DORR.

Improved Stock.

CATTLE of the Durham, Devon, Hereford, Alderney, and Ayrshire breeds.

SHEEP of the Native and French Merino, Saxony, South Down, and Cotswold.

PIGS of the Lincoln, Suffolk, and Berkshire breeds.

From our long experience as breeders and dealers in the above kinds of stock, and our excellent situation for purchasing and shipping, we think we can do as good justice to orders, as any other house in the United States.

A. B. ALLEN & CO.,
April 1, 1852—tf. 189 and 191 Water st., New York.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, Jr., Editors.
P. BARRY, Conductor of Horticultural Department.

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Five Copies for $2—Eight Copies for $3, and any larger number at the same rate.

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DANIEL LEE,
December, 1851. *Rochester, N. Y.*

POSTAGE ON THE GENESEE FARMER.—50 miles or under, five cents per year; exceeding 50 miles and not over 300, ten cents; exceeding 300 and not over 1000, fifteen cents; exceeding 1000 and not over 2000, twenty cents; exceeding 2000 and not over 4000, twenty-five cents; for any distance exceeding 4000, thirty cents.

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.

THE GENESEE FARMER

VOL. XIII. ROCHESTER, N. Y., SEPTEMBER, 1852. No. IX.

HOW CAN HE GET WISDOM THAT HOLDETH THE PLOW?

THE wisdom of a learned man cometh by opportunity of leisure. How can he get wisdom that holdeth the plow, that glorieth in the goad, that driveth oxen, and is occupied in their labors, and whose talk is of bullocks?—*Ecclesiasticus.* *Chap.* 38, *verses* 24, 25.

FOR three thousand years, and how much longer we know not, farmers have been reproached as stupid hinds, who had little "leisure to get wisdom," and less disposition to improve aright the "opportunities" which they possessed. Is it not time that all men identified with this great interest, should do something to increase the knowledge of farmers, who, we are told by the author above quoted, "are not sought for in public council"? Improved implements of tillage and husbandry have greatly diminished the labor of production, and agriculturists now enjoy, if they will, as much leisure for study, reflection, and the getting of wisdom, as any other class in society.

How to turn this leisure to the best account, is a question which every reader should deeply ponder. The careful reading of the works of wise men suggests itself as one means open to all, in this age of cheap books, for the increase of knowledge. But so far as agricultural arts and sciences are treated of, our books are sadly defective; and down to this hour, those most interested in their improvement have never so much as lifted a finger to make agricultural works what they ought to be. One can write as well as talk a great deal about the breeds of bullocks, and impart no instruction whatever; and for the best of all reasons, because the writer has no knowledge to communicate. Writing and printing signify little but the lamentable waste of the time of all readers, unless due care has been used to make the instructor worthy of his high calling. If a writer be ignorant of the principles of his profession, how can his darkness give light to others? If the science of farm economy is to be taught at all in this country, is it not high time that somebody be fully educated, to instruct us in this science? Unless something more is done to augment the knowledge of those that write for agricultural periodicals, how is it possible to maintain the interest, and steadily increase the value of these publications? If our teachers make no progress, can their pupils be expected to go far beyond them? Will it be said that in agricultural knowledge, all ideas of advancement are utopian and visionary? The farmer who lived in the time of Abraham cherished this stand-still notion, as "*he gave his mind to make furrows, and was diligent to give the kine fodder.*" Let us not be understood as undervaluing the devotion of "mind" to the making of furrows, nor the virtue of diligence in giving the kine fodder. It is the refusal to cultivate the mind as well as the soil, that we condemn. It is the everlasting degradation of the owner of the kine to their level, that we shall never cease to reprobate. It is that blind, mistaken policy, which excludes so large a share of the freeman of this Republic from its "councils," except as they are made the tools of others, that we hope to see American farmers promptly repudiate. In many respects they occupy a false position, because they neglect to improve their leisure hours, and take little pains to carry the breeding of bullocks beyond the skill and practice of Jacob. We must improve the breeding of husbandmen, before they can do much to improve the breeding of cattle. Man is the starting point, and if the community do nothing for the professional education of working farmers, their advancement for the next three thousand years will be no greater than it has been during the last. Let every thinking person consider well this fact, and then co-operate with all that seek to elevate agriculture to the first rank among all learned and useful pursuits.

The natural sciences have been built up by repeated and careful experiments. These lead the critical investigator from things known to things unknown, which constitutes progress in knowledge. Practical and scientific researches into the laws that govern all constitutional changes in domestic animals, have never been made in this country. Why is this? The only satisfactory answer that can be given, is the unwillingness of farmers to encourage and support one experimental farm in any State in the confederacy. The census of 1850 shows that the value of the animals slaughtered in a year, for human food, is not far from one hundred and twenty million dollars. The cheap production of meat is, therefore, a matter of national importance; and who can doubt that a series of wisely directed experiments in the breeding, rearing, and fattening of neat cattle, hogs, and sheep, would throw new light on these important operations?

The popular taste for neat and commodious dwellings, comfortable out-buildings, beautiful and well cultivated gardens, fine orchards, and small, highly productive farms, needs to be fostered in every neighborhood over the whole length and breadth of the United States. How is this to be done? Not, certainly, by worshipping the almighty dollar, and disregarding everything else. Avarice is incompatible with the "wisdom of a learned man," and improves neither the social nor the moral faculties of the human family. To unlearn bad habits and traditions, is often the first and most difficult step toward reformation in the management of one's estate. Needful reforms in agriculture demand that great pains be taken to multiply examples of well conducted, beautiful farms, as models for the imitation of others. Perfect neatness and success may be attained without a fortune, as the basis of operations. By concentrating one's attention and means on a farm of moderate size, more comfort, and more money, as well as a more inviting appearance, will be realized. To make a wise use of capital is not so easy a task as some suppose: it requires sound judgment, experience, and cultivated common sense. Let the common sense of every farmer be properly cultivated, and we shall have no more occasion to ask for agricultural schools, and the systematic study of all the elements of soils, of cultivated plants and fruits, and of domesticated animals. The application of the best powers of intellect to the improvement of agriculture, aided by all needful funds and other appliances, will be made so soon as the people comprehend their true interests in this matter. It is uncultivated common sense that still asks: "How can he get wisdom that holdeth the plow, that glorieth in the goad, that driveth oxen, and is occupied with their labors, and whose talk is of bullocks?" Not *to try* to get wisdom is to take nature's bond that no wisdom shall be gotten. Wisdom exacts an honest and an earnest effort to obtain her fair hand; and none but simpletons expect to win her smiles by other means. That great wisdom and practical farming can grow up together, we religiously believe; and the steady increase of knowledge among the cultivators of the soil, until they shall stand, confessedly, the best educated men in the world, is the object aimed at by their humble servant. Their educational advantages are now extremely defective, and the proper remedy must be found and applied before many more years elapse. We must admit, however, that the locomotive of agricultural progress is not yet built; nor is the track laid on which it is to run. At present, very few are willing to take stock in the enterprise, and its friends are waiting patiently for a favorable change in public opinion. Such a change is inevitable, although it may not come in the lifetime of the writer. All should plant good seed in the best soil that can be found, and leave the harvest, if need be, to the next generation. It is better to plant for posterity than not at all.

◆

EXPERIMENTS ON DRAINING.

In the April number, page 109, will be found an article on underdraining, in which we detailed the best means to be adopted for removing stagnant and spring water from land, and also our opinion of the reason for and necessity of *under*-draining—making the soil a filter, in which the rain water, as it percolates through to the drains, shall leave its ammonia, the most important and beneficial of fertilizers, for the wheat and corn crops—thinking that a thorough system of under-draining would do more to remove the innumerable insects, blights, and rusts, which now make such fearful devastation on our crops, than all other modern improvements combined. We believe, also, that on most wheat soils—those even which are usually considered sufficiently dry already—under-draining would, for a few years at least, *add one half* to the present crops of wheat, clover, &c., and the land would ever afterward be permanently improved, the beneficial action of manure more apparent, and the soil be in that condition best suited to attract fertilizing gases from the atmosphere. There is no question but what underdraining has been the great means by which the agriculture of Great Britain has been so much improved during the last half century, and that its adoption would be equally beneficial on this continent.

Will it pay? is, therefore, the great question; for, if it will, there will be found no lack of energy and enterprise among our land-owning farmers, to push it forward with vigor. All that is necessary for its general adoption, is to show that it can be so done as to yield good profits. Where land is worth but $15 or $20 per acre, it may not pay to expend $25 to $30 per acre in underdraining it; but where undrained land is worth from $60 to $100 per acre, there can be no doubt that an additional $30 per acre, judiciously expended in underdraining, would be a first rate investment. There is in most of our soils an abundance of organic and inorganic food of plants, which they can not obtain on account of stagnant water excluding the air, without which no healthy decomposition can take place, or plants thrive, and which underdraining would render in a fit state for assimilation.

In the *Transactions of the N. Y. State Ag. Society* for 1852, is given an account of experiments on draining, by Mr. John Johnston, of Seneca county, N. Y., and by the Hon. Theron G. Yeomans, of Walworth, Wayne county, N. Y., to whom the Society has awarded premiums. The statements of these gentlemen are exceedingly interesting and instructive, and did the limits of our paper permit, we should like to lay the whole of them before our readers, but must be content to give extracts only. Mr. Johnston's farm is near Geneva, situated on the rich clay ridge which extends from the Seneca river southerly to Tompkins county—a ridge of land devoted chiefly to the cultivation of wheat. He has been making efforts for more perfect drainage since 1835, when he imported from Scotland some patterns of draining tile, and caused them to be made by hand in his neighborhood. The beneficial effects were such as to induce the Hon. John Delafield, Esq., to import in 1848 a machine for making tile in Seneca county, since which time the price of tile has been greatly reduced, and "no excuse exists for wet fields, or grain being destroyed by freezing out."

> "The question as to the depth of drains has always been one of interest, and some uncertainty. On this point I deem it absurd to propose any fixed rules, as the depth must depend upon the formation of the land and the nature of the soil. The rule adopted by me, is first to select a good outlet for the

water, then to dig a ditch so deep as to find a hard bottom, on which to lay the tile; yet I have laid many tiles on clay, and they have done well. On my farm this depth is generally found at two and a half to three feet. The distance between the drains is regulated by the character of the soil: if it is open or porous, drains three or four rods apart may thoroughly drain it; while on more tenacious soils, two rods apart may be needed. In most cases, where my fields lay nearly level, it has been found necessary to construct the drains nearer to each other, adopting as a rule, that the drains should always reach the point of the field where water is indicated to rise, and that is always at or near the highest part of the field, although that may only be observed when there is much water in the earth and the springs full, or when the field is in wheat or clover. At such elevations I put my drains deeper and near each other, to make sure to keep the water all under ground, using smaller tile leading to the main or submain drains. This rule has been important; for when opening ditches on the low grounds, the water has flowed with such force as to induce most people to believe that it was derived from springs close by, when possibly the spring may be some sixty or eighty rods distant, at or near the most elevated part of the field, which, when reached, may save much expense in draining the lower lands. This shows the necessity of thoroughly examining in the wettest season the land to be drained. The main drains occupy the valleys or lowest grounds, receiving the lateral drains and collected water. They are constructed of larger tiles, *and discretion and care are very necessary to proportion the main drains to the quantity of water to be discharged.* In several instances I have found it necessary to lay a double row of four inch tile in main drains, to carry off the quantity of water collected by the smaller tile. I have generally used the half round, or horse shoe tile, as they are called. The four inch tile are in most cases large enough for main drains, and they will discharge a body of water far greater than most persons would believe, unless they witnessed their action. There may be places where larger tiles are needed. In one instance I found it necessary to use six inch tiles for sixty rods, and laid them in double rows. This would only be necessary where the thaws of early spring or heavy summer rains are apt to collect large quantities of water on the surface. To prevent a wash of the surface in such places, I have at regular distances filled the ditch directly over the tiles with small stones for a length of from twelve to eighteen inches, the stones to rise a little above the surface to prevent their being covered by the plow. Through these stones the surface water will pass rapidly down into the tiles, and be carried off at once. When the tiles are laid in the ditches with regularity and care, the earth is thrown in by a plow having a doubletree nine and a half feet long, to enable a horse to go on each side of the ditch, which is a rapid and economical way of filling them. In regard to cost, I find that drains constructed with two inch tiles can be finished complete for thirty cents per rod; yet something must depend on the digging, whether the earth be hard or soft, and the distance to draw the tiles. Mine have all been drawn five miles, and I find that two inch tile are large enough except for main and submain drains."

"About six years ago I began to drain a field on the boundary line between Mr. Delafield and myself. The field contains about twenty acres, of which six were then subject to drainage. The six acres had seldom given a remunerating crop, even of grass. After draining the six acres, the whole field was plowed and prepared for corn, two acres being reserved for potatoes. The usual care was given to the cultivation of the whole crop, which during its growth showed a marked difference between the drained and undrained portions of the field. The yield of this field proved to be the largest ever raised, as I believe, in the county, the product being eighty-three bushels and over, per acre. When the corn was husked and housed, it was weighed and measured in the ear, and allowing seventy-five pounds to the bushel for corn and cob, as has been customary in this region, the product was as above stated. This field attracted much attention from my neighbors and other gentlemen from more distant places. It was examined at the time of draining, and after plowing, both the first and second season, permitting the parties to walk on the drained parts without any undue moisture, while all other undrained land in the neighborhood was muddy; and, as before stated, the corn was found to be far more vigorous in the plant and abundant in the grain. In the following season after the corn I cropped it with barley, and found that the drained land produced altogether the finest plant and the best yield of grain. When the barley was harvested, I prepared the field and cropped it with wheat. The difference again was so striking and distinct in favor of the drained land, that I felt the propriety of thoroughly draining the whole field, which was completed without loss of time, at a cost of twenty-two dollars per acre. I then plowed and sowed with barley and seeded with clover. Of the latter I cut a very large crop last summer, and not one square foot of the clover froze out; and now I can rely on a good crop of anything I may sow or plant."

Mr. Johnston has made *sixteen miles* of tile drains on his farm, and is so far satisfied with the results that he drained six acres last fall, and intends to do so till there is not a wet spot on the farm. He finds it difficult to state in figures the increased value of the drained land; but on such land as he has, if he gets two crops of wheat from the drained land, the excess of yield is sufficient to cover all expenses of draining, and sometimes the *increase of one crop on the drained over the undrained land, more than pays for the cost of draining.* Mr. Yeomans, after detailing his mode of laying tile, which is very similar to Mr. Johnston's, concludes thus:

"Some of the advantages derived from draining are, that the ground becomes about as dry in two or three days after the frost comes out in the spring, or after a heavy rain, as it would do in as many weeks before draining; enabling the farmer to work his land at almost any time he may desire to do so. It also dries it uniformly all over the field, so that in plowing he does not find spots of wet and dry, but is all in good condition at once. It causes the lowest places, which are generally too wet in seed time, and consequently produced but little if any crop, to produce the best of any part of the field, being generally the richest soil, from having had the wash of the surface of the land about it for many years.

"Some of the land I first drained had been planted with young orchard trees; and in the wettest places, some trees died the first winter and a greater number the second, and some young nursery trees on the same ground were nearly thrown out of the ground by the frost. After draining it, I. replaced the orchard trees, and all have grown well, and the first crop of nursery trees, which I was compelled to remove to save them, before draining, have been replaced by others since draining, and they have succeeded perfectly; so that I may now well say, that if we desire to deprive Jack Frost of his power to do us harm, we should keep everything as dry as possible which is within his reach and liable to injury. And I am from my own experience fully convinced that, for whatever crop, and especially any crop liable to be injured by frost in winter, such as wheat, clover, &c., whether the season be wet or dry, if the soil retains its moisture too long at any season of the year, (and most soils do,) it will be materially benefitted by draining; and in fact I am well convinced that most of the winter-killed young fruit trees in many places, especially the peach, as well as the winter-killing of many valuable shrubs, vines, and evergreens, which survive the winter in some places in this latitude and are destroyed in others, is more to be attributed to excessive moisture in the soil during cold weather, than to all other causes combined.

"I will only estimate the increased value of the land by saying that I have the past year made over 1,200 rods on twenty acres, at a cost of about $25 per acre, and that I should not permit such land to remain without such draining even were the expense doubled. Most of the lands so drained have been purchased by me immediately preceding the construction of the drains, and their very recent construction precludes the possibility of giving the specific and comparative productive capacity before and after draining, though on much of it very light crops have been grown for many years past, and no good crop of wheat has been raised on it for a long time; but the reason has not heretofore, to my knowledge, been ascribed to an excess of water, which I believe to have been the principal cause of the non-productiveness of the land. From the experience of two seasons on the small quantity first drained, I am of the opinion that the increased value of the land is much greater than the cost of constructing the drains, but more time is needed to fully test with accuracy the benefits to result therefrom."

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ARTIFICIAL MANURES.

In the future of agriculture in this country, the manufacture of chemical manures is destined to occupy a most important position, and to be one of the principal means of improving it. It is therefore necessary, at the commencement of this movement, that chemists and the agricultural press generally, exercise caution and discrimination in the recommendation of the various articles now manufactured and offered for sale to the farmer as special fertilizers for this or that particular kind of crop; for by encouraging in any way the sale of a worthless article, the cause of agricultural advancement is seriously injured, and discredit brought upon all the recommendations of real science in the minds of the farming community.

In England an immense trade is carried on in the manufacture and adulteration of chemical manures, especially of superphosphate of lime. It is about ten years since this manure was first manufactured, and such has been its success that it has gradually increased in demand every year, till now many thousand tons are annually used as a special manure for the turnep crop. It has done as much to improve British agriculture as any one thing, by increasing the growth of ruta bagas, turneps, and other root crops, which being consumed on the farm by cattle and sheep, increase the quality and quantity of the manure heap, and, as a consequence, the average yield of wheat and other grains. And thus, while it is found that superphosphate of lime is of no value as a *direct* manure for wheat, and is not used for that purpose, yet its employment as a special manure for the turnep and clover crops has, by its good effect on them, *indirectly* increased the wheat crop to a considerable degree. It is manufactured from finely ground coprolites, containing 55 per cent. bone-earth phosphate, and sold for *one cent per pound.* This is a good article, and is extensively used; but there is some prejudice against it in the minds of farmers, because it is made from a *mineral phosphate.* Another article, somewhat superior, manufactured from Saldanna bay guano, animal charcoal, and bones, sells for one and a half cents per pound.

Some time last year several deposits of nearly pure phosphate of lime were discovered in two or more districts in the United States, and the fact was extensively announced as a great blessing to the agricultural community. We thought that it would be immediately manufactured into superphosphate of lime, and sold to our farmers at a reasonable price; and that with it the growth of root crops would greatly extend. We were indeed informed that arrangements had been made by the owners of the deposits for its manufacture and sale, and accordingly recommended our readers to purchase and try it as a manure for those crops which experience and experiment proved it would greatly improve; and also stated what crops it would not benefit, as found by direct and extensive experiments in England.

We have recently received two samples of superphosphate of lime, manufactured in New York city, one called "*improved* superphosphate of lime," and the other, "superphosphate of lime." Both are offered at the same price—two and a half cents per pound. If the samples sent us are fair specimens of the articles, we should prefer the plain superphosphate as a manure for root crops, from the fact that it is the best manufactured article; the bones are all acted on by the acid, and the sample is in a finely powdered state; while the "improved" article contains quite a large quantity of undecomposed bones, or animal charcoal. We do not say that sufficient sulphuric acid has not been used, for indeed we know from experience that it is next to impossible to get a good article of phosphate of lime from burnt bones, or animal charcoal, unless they are reduced to a fine powder previous to the addition of the acid. The "improvement" is stated to be the addition of Peruvian guano and sulphate of ammonia. For wheat crops the addition of these substances is a great improvement, and the manure would be valuable for wheat in the exact proportion in which they made a part of its composition. Good Peruvian guano should contain 16 per cent. of ammonia, and about 20 per cent. of phosphate of lime. The commercial sulphate of ammonia, manufactured from gas liquor, contains about 20 per cent. of ammonia. The superphosphate of lime, made either from the mineral phosphate of lime or from animal charcoal, or burnt bones, would contain no ammonia; and the addition of sulphate of ammonia and guano, is to supply this deficiency, and to make a manure that would correspond more with that made from *unburnt bones.*

In purchasing an artificial manure for the wheat crop, *ammonia* is decidedly the most essential and expensive ingredient, and the price of the article is regulated by the quantity which it contains. In England, phosphate of lime can be purchased for, and is valued at, one and a half cents per pound, while ammonia cannot be purchased for less than twelve cents per pound, and is really worth more. As a manure for turneps, however, a manure is valuable in the proportion it contains of *bi-phosphate of lime*—this substance, from its solubility, having a most magical effect on that crop; and it is to convert the insoluble phosphate of lime into *bi-* or *super*-phosphate, that sulphuric acid is employed in the manufacture of the article. Soluble bi-phosphate of lime is valued at eight cents per pound.

If, however, we admit that phosphate of lime is a necessary ingredient in a special manure for wheat, Peruvian guano would at present be much the cheapest source of it; for, in addition to the 16 per cent. of ammonia, it contains 20 per cent. of phosphate of lime in first rate condition for assimilation by the plant, as well as other fertilizing ingredients of minor importance. As a manure for wheat, therefore, we greatly prefer good Peruvian guano, even to this *improved* superphosphate of lime, especially if the sample sent us is a fair specimen of the article.

As conservators of the agricultural interest, we make these remarks simply to put farmers on their guard against the *indiscriminate* use of these various artificial manures; and that, if they try them (as we hope they will on a small scale as manures for wheat this year,) and the result is not beneficial, they may not *indiscriminately* condemn all book-farming, science, and artificial fertilizers as unmitigated humbugs.

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SOIL BEST ADAPTED FOR THE CULTURE OF WHEAT.

All of our commonly cultivated plants are composed precisely of the same elements, the only chemical difference between the vast varieties of plants being the *relative proportion* in which the *same elements* unite to form the plant; so that if a soil will produce any one of our cultivated crops, it possesses the capacity, so far as the elements of plants are concerned, of growing any other crop, to some extent. In judging of the best kind of plants to be cultivated on any particular soil, therefore, we have to look to the relative proportion in which the elements of plants exist in the soil, and adopt that class of plants which requires most of the particular elements in which the soil abounds, or *requires least of those in which it is deficient.* This would seem to be a common sense view of the subject, yet there are many other circumstances, often overlooked, which, if considered, would materially affect our conclusions. In a large crop of corn there are all the elements which a large crop of wheat contains, and also in larger quantities, yet there are thousands of acres of land that produce immense crops of corn that cannot be profitably cultivated with wheat. A good wheat soil will always produce a good crop of corn, if properly tilled, while much of our best corn land will not produce wheat under ordinary culture. The cause of this great difference is not, we have shown, owing to a deficiency in the soil of any element of the wheat plant; for the requirements of the corn crop are identical in kind and greater in quantity, than that of wheat. It must, therefore, be owing either to the manner in which the various elements are assimilated by the plant, or to the existence in the soil of some substance, which though sufficient of it may exist in a corn soil for the actual demands of the wheat crop, yet from the different habits of growth of the two plants, a much larger quantity may be necessary for the performance of the healthy functions of the wheat than of the corn plant. This substance is most probably clay; for all soils which experience proves to be best adapted to wheat culture, abound with this substance and lime. The reason why clay is so much more necessary and beneficial for wheat than for corn, is not clearly understood. In light soil the wheat plant is found to throw out its lateral roots very near the surface, while in a clayey or heavy one it is more inclined to tap, and the lateral, fibrous roots are at a greater depth. In the former case the plant would be more exposed to the influence of frost and thaw, and would be more likely to heave out in the spring, while in the latter it would be better able to stand all the vicissitudes of cold and heat, from the roots being at a greater depth, and having a firmer hold of the soil. It is therefore probable that one of the benefits which the wheat plant derives from clay, is its preventing the extension of fibrous surface roots, and forcing the plant to throw out a single *tap* root, which descends much deeper and takes a firmer hold of the soil.

If this is a right view of the subject, we should loosen the subsoil of all our wheat fields, by deep plowing and subsoiling; while on soils rather too light for wheat, every possible means should be used to render the *surface soil compact and firm.* Treading the wheat in the fall with sheep has been practiced with advantage; but in doing so, caution is necessary to prevent serious injury in case winter immediately sets in. On all soils which produce good crops of corn, we believe wheat may be grown, inasmuch as there is nothing lacking which enters into the wheat plant, and all that is necessary is to impart to the soil a certain degree of texture and tenacity, which all good natural wheat soils possess. For this purpose, heavy rollers and other mechanical means must be employed; and a presser something similar to *Croskill's Clod Crusher*, of which we have often spoken, would be of great benefit. We do not wish to be understood to say that consolidation is the only thing necessary *in all cases*, to ensure a wheat crop on soil where corn, barley, and oats flourish; for the land may in winter be so wet as to destroy the plant: yet if drained, and means be taken to render the surface compact, we believe such soils would produce first rate crops of wheat.

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LEACHED ASHES ON WHEAT.

WHATEVER difference of opinion there may be respecting the particular ingredients to which the fertilizing power of leached ashes are owing, nearly all agree that they are a valuable manure for the wheat crop. And as there are, in different parts of the country, old asheries from whence old leached ashes can be obtained at a mere nominal price, we are surprized that they are not much more extensively used than they are. The good effects of 100 to 200 bushels of old leached ashes per acre are most decided on all light wheat soils, and are visible often for years after their application. This prolonged benefit is probably derived from the lime, of which the leached ashes contain some 30 per cent. It is not impossible, however, that leached ashes contain the double salt of silicate of alumina and soda, which Prof. WAY found was the real agent of soils in retaining ammonia and other fertilizers, and that therefore by adding leached ashes, we add ammonia, or at least the means of obtaining it from the atmosphere in the most available form for the wheat plant; and that it is this alkali that so much benefits the crop, and not the potash and soda which may be left undissolved from the ashes. If this is the case, the older the leached ashes are, the better;—the more they have been exposed to rain and the air, the more ammonia will they contain, and the more good will they do to the wheat crop. And it would indicate that on all our wheat soils leached ashes would do more good than the unleached ashes, from the fact that ammonia is so much more necessary as a manure for wheat than the alkalies potash and soda, which are washed out in leaching.

These views, however, are at present somewhat hypothetical, and further experiments are necessary to confirm or refute them; yet the *fact* that leached ashes are a first rate fertilizer, remains a fact still, though we cannot decidedly account for their good effect; and we would recommend all farmers who can obtain them, to do so, and apply them to their light soils previous to sowing wheat this month.

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LICE ON HOGS—A REMEDY.—"BROOMSEDGE" complains in the *New York Plow* for August, that his hogs have suffered much from lice, and asks the editor or some correspondent, for a remedy. As the subject is of general interest, we suggest *sulphur*, to be given in food eaten by the swine, as a preventive. This well known mineral is particularly obnoxious to all insects, and has never failed to clear cattle of ticks when fed to them in their salt. The itch or scab insect that burrows in the skins of sheep, is destroyed by sulphur; and we doubt not that lice on hogs and calves may be driven off by the same remedy. It is said to clear fruit trees of parasitic insects and fungi, either by filling with sulphur holes bored into their trunks, which are then plugged, or by putting it around their roots. We hope that "BROOMSEDGE" will try this remedy, and report the result.

PEAS, AND PORK-MAKING.

In the great corn-growing districts of the western States, corn is doubtless the best food that can be raised for fatting hogs, and that system of feeding best that is attended with least labor and outlay. Grinding or cooking food is of very questionable economy where corn is worth only ten to twenty-five cents per bushel, yet it is in such places that pork-raising is a *directly* profitable business; that is to say, it pays much better to convert corn into pork than to sell it off the farm, *without reckoning the value of the manure in the calculation.* This arises from the fact that the relative difference between the price of corn and pork is there much more in favor of the pork than in this and the older settled States, owing to the cheap rate, compared with value, at which pork can be sent to the eastern cities. In feeding hogs, however, with corn at fifty cents per bushel and pork at four dollars per hundred, we have to be careful and economical of *corn* rather than of *labor*, to make it pay. Grinding and cooking, or soaking in water for twelve hours or so, will well repay the extra labor and expense. It is, however, doubtful whether, taking no account of the manure, it is profitable to feed corn to hogs at fifty cents per bushel, and pork at four cents per pound. Many good farmers think it will not, and keep only sufficient hogs to eat up what would otherwise be wasted, making their pork in summer on sour milk, and finishing off with apples, small potatoes, pumpkins, and "nubbins," or immature corn, in addition to the milk. In this way the actual cost of pork-making is little more than the labor, and the profit considerable. But this system is necessarily limited, and what is required is a profitable plan for feeding hogs, &c., on a large scale, it being otherwise impossible to maintain our farms in a high degree of fertility; that is, we can not export a greater part of the hay, corn, &c., from a farm, and keep it in good heart—without, indeed, we purchase instead of making manure, which in many localities is probably the cheapest way. But, as a general rule, our farmers must keep more stock, make more pork, mutton, and beef, on their farms, before the maximum produce of the soil can be obtained, or rationally expected.

In a judicious system of farm management, we must judge of the economy of growing a certain crop, or feeding with a particular kind of produce, by its effects on other crops of equal or greater importance. Thus, on wheat-growing farms, we have to look not merely to the profit of growing one crop, or feeding, &c., alone, but also to the effect it has on the ultimate object—the production of wheat. And that system of farming is best which yields the most profit *as a whole*, even though actual loss is sustained by growing and feeding out some of the crops, &c. In fatting hogs, therefore, we have to consider what will be the best method to adopt, taking into account the expense at which the food used can be grown, the effect of its growth on the soil, the amount of pork it will produce, and the value of the manure made by its consumption. To determine these points satisfactorily, requires more knowledge than we at present possess; and a series of experiments are needed before we shall be much wiser. It is really known, however, that the principal object on a wheat farm should be the *accumulation of ammonia;* for it is impossible in any other way to increase the wheat crop, which on most soils increases or diminishes as ammonia is supplied or withheld as manure. The wheat plant not only consumes, but actually *destroys* ammonia, during its growth. Corn, barley, and oats, are supposed, from good reasons, to do the same; and therefore none of them is the crop which we should grow for the purpose of feeding out on the farm, with the object of obtaining ammonia for the wheat crop. But *peas* do not destroy ammonia to any extent in their growth, and contain four times as much nitrogen (the essential element of ammonia) as corn; so that not only is a crop of peas produced without much destruction of ammonia, but the manure made by hogs eating them would contain four times as much ammonia as that made by those eating corn, and would therefore be four times as valuable as a manure for wheat. Foods, too, containing a high percentage of nitrogen are highly nutritious; and not only are they best adapted for supplying the wear and tear of animal tissues in working horses and cattle, but experiments prove that they will actually produce the most fat and butter, although these substances contain no nitrogen. Hence we may expect that, weight for weight, peas will make more pork, mutton, or beef, than corn, barley, or oats.

Raising a crop of peas is attended with much less labor than a crop of corn, it is a first rate preparative for a wheat crop, and is off the land in good time for preparing it for wheat sowing. The principal objection to growing peas in Western New York, is the destructiveness of the "pea bug;" but if we grow peas as here advocated, for feeding hogs, this difficulty is removed, from the fact that the bug does little injury to the pea till late in the fall, or winter, and in feeding them to hogs they may be given as soon as harvested, and may be all eaten and the hogs ready to butcher before cold weather sets in and renders more food and attention necessary. Peas are first rate food for horses, cattle, and sheep; but for the horse especially they should be very dry, and therefore it is not desirable to feed them to him soon after cutting. So that, during the prevalence of the pea bug, the hog appears to be the best animal for feeding with peas, and answers every purpose. The pork or bacon from pea-fatted hogs is considered firmer and of altogether a superior quality. We would recommend that the peas be soaked in cold water from twelve to twenty-four hours before feeding to hogs.

In making these remarks, it is not intended to underrate our grand natural crop, maize. In many districts this is the best crop that can be grown for all purposes; yet on wheat farms, where the principal object is the growth of wheat, we would not grow corn for the purpose of feeding hogs—peas being a better crop, because produced at less expense to the soil, and affording the most valuable manure for the wheat crop.

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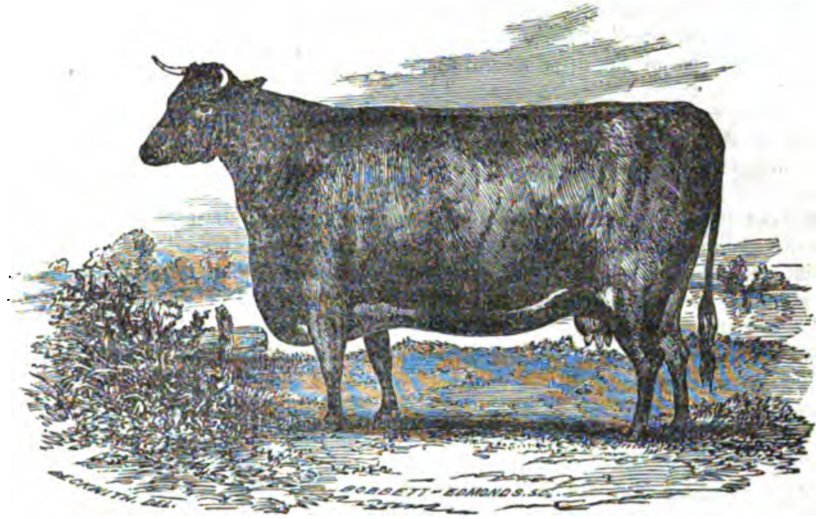
IMPROVED BREEDS OF CATTLE IN THE WEST.

No country in the world is better adapted to the raising of cattle and sheep than our own great Western States, where land is not only plentiful and cheap, but of unequalled fertility, yielding rich natural grasses in great abundance. This undoubted fertility of the soil for grazing purposes, the fine dry climate, the cheapness of land, and the high price of labor, all point to stock-raising and wool-growing as the most profitable department of farm economy in the west. In no country can improved breeds of cattle be so readily and profitably introduced as in the new States of this Union. It is therefore gratifying to observe that our western brethren are making most praiseworthy efforts to improve their breeds of cattle, by importations from the Eastern States and Europe. Last spring a company of intelligent farmers was formed in the Sciota Valley, (Ohio,) for the purpose of importing cattle and improving their present stock, though it is now by no means inferior to any, common in the country. Two good judges were sent to England, in furtherance of the object, and it appears they have purchased and shipped for New York, twenty head of very fine cattle from the north of England, and also intend getting a first rate stallion. These cattle, it is said, will be exhibited in Cleveland, at the Ohio State Fair. The celebrated Short-Horn bull "Lamartine" has been hired by Calvin Fletcher, of Indiana, for the sum of $200 for one season. This, with "Earl Seaham," gives that State the two best Durham bulls in the country. The other day, likewise, we saw passing through this city two very fine young Short-Horn bulls from Col. Sherwood's stock, in the possession of A. C. Stevenson, Esq., of Monroe, Indiana, where we believe that gentleman has already a fine herd of cattle, into which however he wishes to infuse a little fresh blood. Mr. S.'s stock must be very fine indeed if these bulls do not improve it.

From these indications, and many others that might be mentioned, we believe the farmers of the great west are waking up to the fact that it is quite as easy to breed good animals as poor ones, and that the cost of food for the one is no more than for the other, while the difference in nett profit is such as to astonish the natives. The Durham, or Short-Horn, appears to be the most favorite breed, judging from the number and the price at which they are purchased.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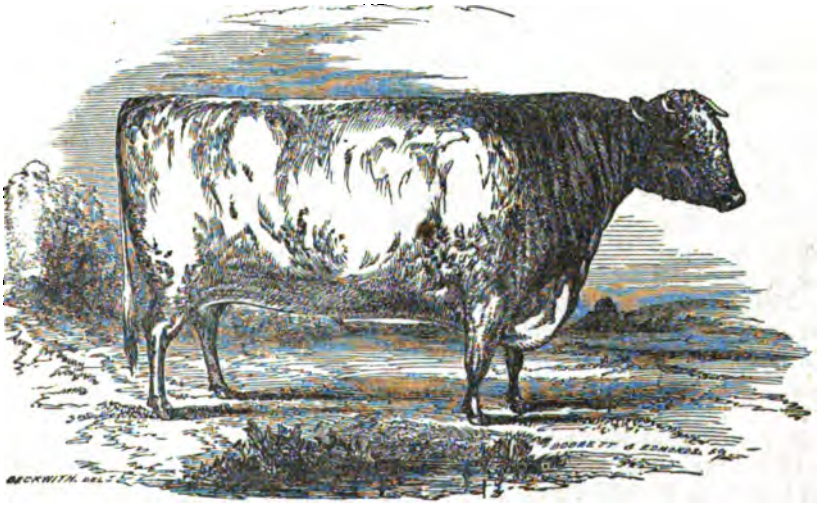
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LORD ERYHOLM.

The accompanying cuts are good representations of this deservedly much esteemed breed of cattle. "Lord Eyrholme" obtained the first premium as the best two year old Short-Horn bull, and "Azalia" as the best Short-Horn cow over three years old, at the New York State Fair in Rochester last year. They are owned by L. G. Morris, of Mount Fordham, Westchester county, N. Y.

The Durhams are generally admitted to be the best breed for rapid feeding and early maturity, being perfect at three years old. Their milking qualities are said to be good; but good fat-makers and milkers seldom go together. They require good, rich pasture, and proper attention in winter. If these are given, the breed can not be beaten for beef-making. A cross between a Short-Horn bull and a Native cow, gives a valuable breed for dairy purposes. Some, however, prefer a cross with the Devon. The Devon, too, is undoubtedly the best bull to use when working cattle are desired. It is likewise said that the Devons stand the winter better than the Durhams. But we must not draw comparisons, else we shall pull an old house on our heads.

THE ELEMENTS OF FERTILITY WORSE THAN WASTED.

The advantage, if not the necessity, of supplying ammonia or substances rich in nitrogen as manure to our wheat crop, is now universally admitted; and we will once again call attention to the great loss which the country sustains in the waste of ammoniacal manures in cities and villages, where they so often generate cholera and other pestilential diseases. All medical experience goes to prove that those organized substances, whether vegetable or animal, that most abound in nitrogen, evolve gases of the most malignant character, when they rot. No other cultivated vegetable, stored up in cities, has generated in its unexpected decay, so much pestilence as cabbage; and no other has so much nitrogen in its composition, nor so much sulphur and phosphorus. The gaseous compounds of these elementary bodies are now carrying death into thousands of families; but the careful study of these elements of pestilence and of human food, who will encourage? The good people of Rochester are now afflicted with cholera, and many have left the city in consequence, when they should have remained and helped to remove the cause of the malady. We have visited the premises where it has been most fatal, (in one block sixteen have died, as we are informed,) and the sources of the malaria are as plain as filthy, wet cellars, and abominable yards, sewers, and privies, can make them. The worst of plagues have been called into existence on board of ships; and pray, what but decaying vegetable and animal matter do ships ever contain to excite malignant fevers? The yellow fever, so fatal in southern cities, and the certain death to whites that spend a single night on some rice plantations, alike confirm the great truth of the organic origin of all pestilential diseases. If all the manure now wasted, and worse than wasted, in American and English cities, were properly deodorized, and applied to the land that needs it, how much sickness and suffering would be prevented! How many acres would produce three times more, for the benefit of all classes, than they now do!

To grow wheat and other crops on poor soils without manure, implies a prodigious waste of labor, for a part of which the consumers of crops in cities are taxed in enhanced prices; but in the end, both those that live in the country and such as dwell in cities, will be punished alike for the common wrong of impoverishing the earth. Producers and consumers must have a better knowledge of each other's wants and means; and instead of using the food of wheat plants to poison the denizens of cities, as is now witnessed in Rochester and Buffalo, all fecal matters must be carried back to the needy fields whence they were taken. From the city of Rochester go out into different sections of country, three canals, four or five railroads, and as many plankroads, for the cheap distribution of concentrated manure. With these advantages, why may not the average yield of wheat, within thirty miles of the city, be brought up to 33 bushels per acre? To achieve this result, and more than double the value of all the real estate in Rochester and Monroe county, requires but the application of a little common sense.

Condensed Correspondence.

Average Production of Wool per Sheep, in each of the States.—I have noticed recently, in several periodicals, an article taken from the census of 1850, giving the number of sheep and the amount of wool in each of the States and Territories in the Union. From these data I have added another column, giving the average weight of fleece in each of the States and Territories. If you will have the goodness to add still another column, giving, so far as you can conveniently, the medium price at which wool has been sold the present season in the several States, putting down Vermont at 37½ cents, and let the whole appear in your valuable paper, the *Farmer*, you will doubtless subserve the wool-growing interest, and very much oblige a constant reader. Daniel Goodyear.—*Hinesburgh, Vt.*

States and Territories.	*No. of Sheep.*	*Am't of Wool.*	*Weight of Fleece.*
Maine,	451,577	1,364,034	3 lbs. 0¼ oz.,
New Hampshire,	384,756	1,108,476	2 " 14 " and a fraction.
Vermont,	919,992	3,410,993	3 " 11¼ " nearly.
Massachusetts,	188,651	585,136	3 " 1 " and a fraction.
Rhode Island,	44,296	129,692	2 " 14¼ " and a fraction.
Connecticut,	174,181	497,454	2 " 13¼ " nearly.
New York,	3,453,241	10,071,301	2 " 14¼ " nearly.
New Jersey,	160,488	375,396	2 " 5¼ " and a fraction.
Pennsylvania,	1,822,357	4,481,570	2 " 7¼ "
Delaware,	27,503	57,768	2 " 1¼ " and a fraction.
Maryland,	177,902	490,296	2 " 11 " and a fraction.
District of Columbia,	150	525	3 " 8 "
Virginia,	1,310,004	2,860,765	2 " 3 " nearly.
North Carolina,	595,249	970,738	1 " 10 " and a fraction.
South Carolina,	285,551	487,233	1 " 11¼ "
Georgia,	560,435	990,019	1 " 9¼ " nearly.
Florida	23,311	23,247	1 " nearly.
Alabama,	371,880	657,118	1 " 12¼ " nearly.
Mississippi,	304,929	559,619	1 " 8 " and a fraction.
Louisiana,	110,333	199,897	1 " 13 " nearly.
Texas,	99,098	131,874	1 " 5 " and a fraction.
Arkansas,	91,256	182,595	2 " and a fraction.
Tennessee,	811,591	1,364,378	1 " 10¼ " and a fraction.
Kentucky,	1,102,121	2,297,403	2 " 1¼ "
Ohio,	3,942,929	10,196,371	2 " 9¼ "
Michigan,	746,435	2,043,283	2 " 12 " nearly.
Indiana,	1,122,493	2,610,287	2 " 5¼ " nearly.
Illinois,	894,043	2,150,113	2 " 6¼ " and a fraction.
Missouri	756,309	1,615,860	2 " 2 " and a fraction.
Iowa,	149,960	373,898	2 " 8 " and a fraction.
Wisconsin,	124,892	253,963	2 " 0¼ " nearly.
California,	17,574	5,520	5 " and a fraction.
Minnesota,	80	85	1 " 1 "
Oregon,	15,382	29,686	1 " 15 " nearly.
Utah,	3,262	9,222	2 " 13 " and a fraction.
New Mexico,	377,271	32,901	1¼ " and a fraction.
	21,690,483	52,518,146	2 lbs. 7 oz., nearly.

We are sorry not to be able to comply with our correspondent's wish. It would be a somewhat difficult task to get the average price of wool in each of the States correctly, though could it be obtained it would, in conjunction with the column added in the above table, be exceedingly interesting. We presume Mr. Goodyear feels proud of his State, and wishes to contrast it with its sisters, for it appears at the head of the heap—yielding 3 lbs. 11¼ oz. of wool to each sheep. Small as this weight appears, it is the highest average in the United States. The District of Columbia comes in second—averaging 3 lbs. 8 oz. There are but 150 sheep, however, and those probably in the possession of a few amateurs. Massachusetts is third—averaging 3 lbs. and 1 oz.; and Maine next—3 lbs. 0¼ oz. Thus it appears that there are but three States in the Union that reach an average of three pounds of wool per sheep. Iowa, Ohio, Maryland, Michigan, Utah, Connecticut, New Hampshire, Rhode Island, and New York, range in the order named from 2 lbs. 8 oz. to 2 lbs. 14¼ oz. Arkansas, Wisconsin, Kentucky, Delaware, Missouri, Virginia, Indiana, New Jersey, Illinois, and Pennsylvania, range from 2 lbs. to 2 lbs. 7¼ oz. Florida, Minnesota, Texas, Mississippi, Georgia, North Carolina, Tennessee, South Carolina, Alabama, Louisiana, Oregon, range from 1 lb. to 1 lb. 15 oz., New Varieties of Wheat.—We have received from quite a number of esteemed correspondents, samples of the best kind of wheat raised in their different localities, and among them several new varieties. These we shall sow this fall, and shall be able to report another season. Some of the letters received we give below, which will be found interesting:

White Blue Stem.—As I am a friend of improvement, I will comply with your request in the December number of the twelfth volume of the *Farmer*, by sending you several heads of wheat. I am at a loss what variety to send, because I do not know what varieties you have, but I will send the best we have. The kind I send you we call the *White Blue Stem.* The first we had of it we cut in 1849, and it beats all the other kinds that we have. It generally looks poor in the fall and early in the spring; but after the weather gets warm, it outgrows all the other kinds for a while. It grows rather taller than most other kinds, but does not lodge soon. The straw is blue, if free from rust. The head looks slim, but it turns out well in threshing. The seed is full and white, if pure. The rust does not hurt it so soon as most other varieties. This year the grain does not look so bright as usual. The harvest has been later than usual, which we suppose is the reason of that. In a few cases there have been as high as forty and forty-five bushels to the acre raised in this valley. There is more of this wheat raised in this and the two adjoining townships, than of all the other varieties put together. I will also put some seed in the letter, so that if you have none, you can try it; and I wish you good success. Christian L. Holsinger.—*Bedford Co., Pa.*

Australian Wheat.—Inclosed I send you a sample of the celebrated *Australian Wheat.* This is of my own raising, from seed that I had sent to me last fall from my native place, (Tetauket, Long Island.) I have about three acres, which, although sown nearly a month later than it should have been, (Sept. 30th,) will prove a fair crop. I intend to sow ten acres of it this fall, which I have reason to believe from what I have seen of it, will yield about thirty-five bushels per acre without any extra pains being taken with it. At least, I am confident that it will yield a third more per acre than any other kind of wheat now grown in the United States. I hope to be able to supply at least a part of those of my neighbors who are anxious to get the seed of it the coming year.

The wheat crop in this vicinity is very good this season, and is now nearly all harvested and secured, without a drop of rain. Other crops are somewhat retarded by drouth, but the rain to-day is reviving.

We have succeeded in raising some very beautiful flowers from those seeds you sent us. They attract the attention of passers by, who often inquire where we got the seed, to which we are always happy to answer, "They were presented us by the editors of the *Genesee Farmer.*" D. D. Tooker. —*Napoleon, Mich.*

Washington Wheat.—I herewith inclose you a sample of wheat, known here as the *Washington Wheat*, which agrees with the description of the *Australian Wheat* given in the *Genesee Farmer.* It has been very much admired by farmers in this neighborhood. We raised on one acre, accurately measured, and with nothing more than the ordinary barn-yard manure, forty-one and a half bushels of clean wheat, weighing sixty-two pounds to the bushel. Its flour-making properties were very much questioned; but if it is not left to stand till it becomes too ripe, and with a miller that understands his business, it will make as good bread as any other variety that is raised in this district. You will please, through the medium of your valuable paper, let us know whether it is the *Australian* or not. Some of the ears contain over a hundred grains; one reached 120. Wm. W. Parker. *Parkersville, Chester Co., Pa.*

I herewith inclose a sample of a variety of wheat that I obtained a few years ago from a man that moved from Columbiana county, Ohio, to this place at that time. It was from a crop grown on five acres of land, the entire yield of which he said was over two hundred bushels. The inclosed specimen is of the third crop raised since I procured the seed, sown the latter part of September, on spring wheat stubble land, and had but an indifferent chance. The marked phase of the variety appears to be tall, coarse straw, with long heads, well filled with small red grains. Yields well, weighs well, and makes very good flour.

This section of country is not considered capable of producing good crops of wheat, and therefore very little attention is paid to it. Cheese-making is the great business with farmers here; and the hundreds of tons sent out of the country is, in my opinion, exhausting those great elements of vegetation which we already need in greater abundance in order to produce good crops of wheat. EZRA HARRINGTON.—*Greene, Trumbull Co., Ohio.*

Herewith I send you three of the most approved varieties of wheat grown in this district. They are known here by the names of *Blue Stem, White Bearded,* and *Tennessee.*

The *Blue Stem* is rather late, but grows large, and is very productive. The straw is stiff and stands up well. As yet it is a sure crop, makes excellent flour, and commands the highest price of any variety known here.

The *White Bearded* is a rather early wheat of large growth, stands up well, and yields well. The grain is very sound and heavy, and makes excellent flour.

The *Tennessee* is a middling early wheat. Smooth, white chaff, rather weak straw. Not very productive, but makes excellent flour.

We have also the *Mediterranean, Golden Chaff, Red Chaff, Smooth* and *Velvet N. Y. Flint,* &c., but the three described are considered the best here. ROBERT FRAIZER.—*Danville, Ind.*

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SOWING OATS WITH WHEAT.—A farmer residing in Grundy county, Illinois, having repeatedly tried the experiment of sowing oats with wheat as a protection from the severity of the winter, is fully satisfied that it will answer a good purpose. After his ground is prepared for the wheat, he first sows one bushel of oats per acre and then puts the usual quantity of wheat, and harrows them in together. He has this season three different pieces of wheat on the same ground, all prepared alike. On the first piece he sowed with the wheat one bushel of oats per acre; on the second, half a bushel; and on the third, no oats at all. The same kind and quantity of wheat was sown on each. The first piece is good, without any chess. The second piece is a middling crop, with a little chess. The third piece is nearly all chess, and not worth harvesting.

A subscriber to the *Farmer* here has this season tried the experiment of sprinkling his onion beds with brine, made by adding salt to water till it would swim an egg, and then to one part of the brine put two parts of water. This mixture will kill all the grass without injuring the onion plants, thereby saving much labor. HENRY WATKINS.—*Reed's Grove, Ill.*

The fact stated by our correspondent is of much value, and the practice of sowing a few oats with winter wheat on soils on which it is apt to winter-kill, should be more generally adopted. The oats kill out in the winter, and afford protection and manure to the wheat plant.

The mixture of salt and water, though it might have answered to a charm in this particular instance, should be used with caution; for we are constantly informed of experiments with salt where the whole crop was destroyed.

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SOAKING CORN IN A SOLUTION OF HARTSHORN.—Reading, in the April number of the *Farmer,* that soaking corn in a solution of hartshorn was attended with great benefit, I was induced to try it. I put two ounces of hartshorn to a peck of corn, and soaked it six hours, planting it immediately afterwards, and rolling it in plaster as I planted. I also planted corn in the same field, rolling it in plaster without soaking in the hartshorn; and there is no difference in the corn. I also read that salt on potatoes was good. I tried it, and it proved fatal. A SUBSCRIBER.—*Starke county, Ohio.*

At the time we received the above communication, Mr. BIGELOW, of Orleans county, N. Y., was in our office, and said that he and many farmers of that neighborhood had used the solution of hartshorn for corn, just as did our friend, *with the most beneficial results*—the corn soaked was at least a foot higher than that not soaked in the hartshorn, other things being equal.

It is known that ammonia, or hartshorn, has a very stimulating effect on corn, and indeed on all vegetables; but we can hardly see how it is possible that the small quantity which corn would imbibe by soaking in such a weak solution, could have a *fertilizing* effect on the plant. If it does any good, it must be in strengthening the germinating principle, and giving the plant a good start, so that it can afterwards better help itself. If any others of our readers have tried it, we should like to hear the result.

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Horticultural Department.

CONDUCTED BY P. BARRY.

DEATH OF A. J. DOWNING.

By one of those terrible accidents that redden the pages of our daily history with human blood, this gifted and estimable man has been cut down, in the very prime of life, and in the morning of his influence and usefulness.

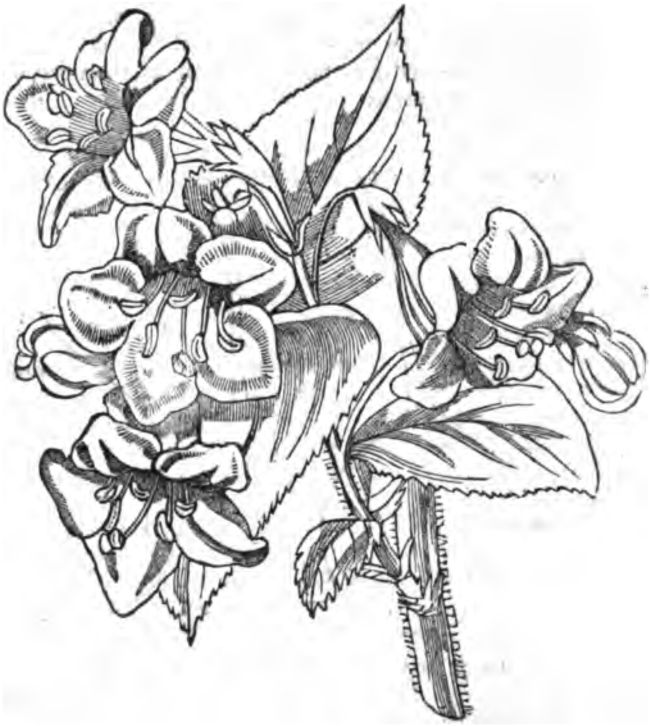
Of all the records of recklessness, this burning of the steamer *Henry Clay* will be recollected as one of the most painfully aggravated and inexcusable. That for the sake of a paltry strife, seventy or eighty human beings should be hurried into eternity, in broad day light, on the peaceful waters of the Hudson and within a rod of the land, is truly a most excruciating thought. If sympathy can afford any consolation to the mourning relatives of those who so suddenly perished, surely they have it. But what is sympathy? What can the world say or do, to assuage the grief of the lonely widows, the orphaned children, the desolate fathers, brothers, and sisters, whose loved ones have fallen victims to this sad disaster! Ah! very little indeed!

The loss of Mr. Downing is no common one. It is felt, by all who knew him and who appreciated his talents and labors, as a national calamity. As a contemporary has truly said, "There is no man whom the country could so ill afford to lose, or whose services can so little be replaced, as those of Mr. Downing." He was a man of shining talents and the most varied accomplishments. As a pomologist, his works are looked upon as the standard American authority, both at home and abroad. He was familiar with horticulture in all its branches, both in theory and practice. In landscape gardening and rural architecture he had no equal in this country. Besides, he was a polished scholar, and a graceful and effective writer. He had made himself thoroughly acquainted with the resources of the country, and the wants of the country people. Country life was his study: how its industry might be expanded and improved—how it might be refined and elevated—how its comforts and pleasures might be multiplied. How natue and art might best be united in beautifying the country home, and making it expressive of the social life, as it should be, of the American people, was his great theme—his great object. How devotedly and successfully he pursued it, is well known—the face of the country proclaims it. Its improved architecture, its orchards, and its gardens, everywhere speak of his teachings—of the knowledge and the taste he has disseminated, and the influence he has exerted upon the hearts and minds of his countrymen. But he is gone. His labors are ended. His life was a short one, but active and useful, and we trust prepared him for a glorious eternal paradise.

Reader, while we mingle our sorrows for the deceased, and our sympathies with his afflicted relations and friends, let us cherish his memory, and honor it by studying anew his writings and teachings, and carrying them into practice. His death is a solemn and impressive admonition that life is uncertain. But we must not despond nor be discouraged, but go forward manfully and perform the work allotted us, "while it is yet day."

Nearly all the Horticultural Societies in the country have passed resolutions of respect for the character of Mr. Downing and sympathy with his family, and the Massachusetts Society has invited the Hon. Marshall P. Wilder to deliver an eulogy on the life and character of the deceased. We are glad to learn this. The selection of Mr. Wilder is the best that could be made. No man is more competent to discharge this sad duty than he, not only because of a long and intimate friendship that has existed between him and the deceased, but because he is himself one of the most able and zealous advocates of rural improvement in the United States, and every way competent to appreciate and pronounce upon the character of Mr. DOWNING and such services as he has rendered. We wish he could be persuaded to perform a like duty at Rochester. Western New York should be foremost in every mark of honor and respect to the character of Mr. DOWNING, for he was a native of our State. He always took pleasure in alluding to our natural advantages and our progress, and nowhere has his labors been of greater practical utility.

THE ROSE-COLORED WEIGELIA. (WEIGELIA ROSEA.)

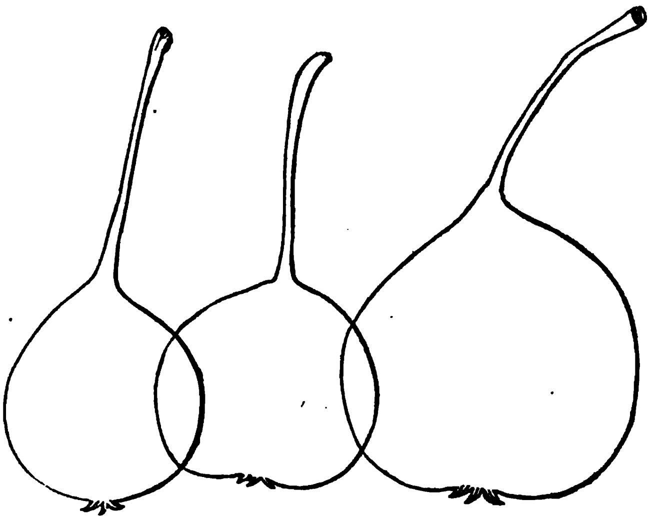


THIS new and beautiful shrub, introduced from China, by Mr. FORTUNE, proves to be a most valuable acquisition. It proves perfectly hardy at Rochester, having stood the past severe winter entirely unharmed, and bloomed profusely in the month of May. The plants were young, too, only one season's growth from cuttings. The flowers are in shape similar to the foxglove, of a beautiful deep rosy crimson, changing to a blush. The later and earlier expanded flowers produce a fine contrast, which is one of the charms of this elegant shrub worthy of note. It makes a pretty spreading bush, in foliage resembling a syringa. It is propagated easily from cuttings of the young wood, or from layers. Mr. HOVEY, in his Magazine, says that it has blossomed well in his grounds, and that "small plants standing in a cold, damp locality, did not have so much as a single shoot injured." We recommend it in the smallest collections. The following is FORTUNE's account of its discovery:

> "When I first discovered this beautiful plant it was growing in a Mandarin's garden, in the island of Chusan, and literally loaded with fine rose-colored flowers, which hung in graceful bunches from the axils of the leaves and the ends of the branches. The garden, which was an excellent specimen of the peculiar style so much admired by the Chinese in the north, was often visited by the officers of the regiment who were quartered at Tinghae, and was generally called the Grotto, on account of the pretty rock-work with which it was ornamented. Every one saw and admired the beautiful Weigelia, which was also a great favorite with the old gentleman to whom the place belonged. I immediately marked it as one of the finest plants of Northern China, and determined to send plants of it home in every ship until I should hear of its safe arrival."

EARLY SUMMER PEARS.

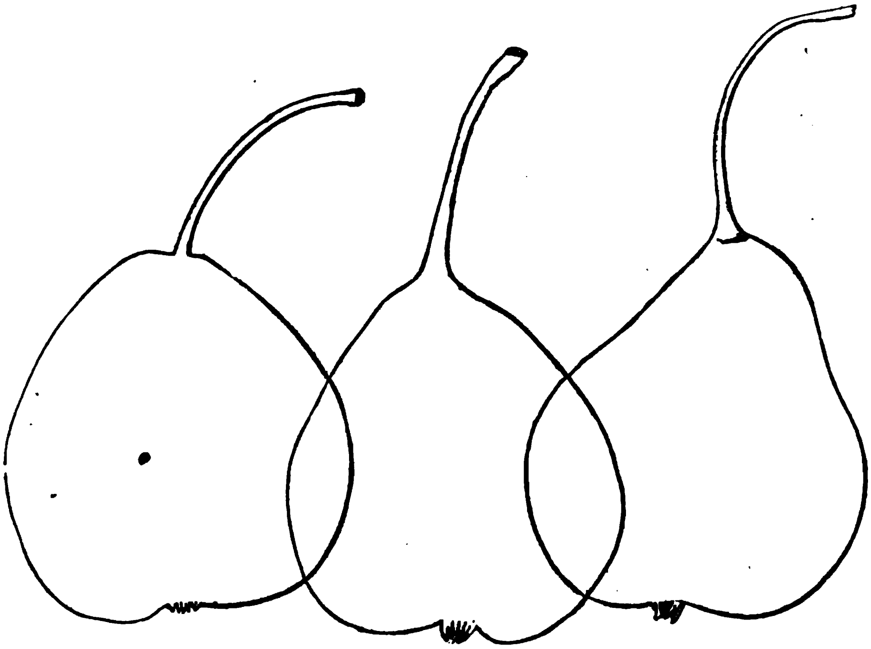
The pear is really the most interesting fruit grown; and we are not at all surprised that those who devote much attention to its culture should in time become so deeply interested in it—so zealous and enthusiastic on the subject—as to appear, to the indifferent, who think that "a pear is only a pear," quite beside themselves. It is one of the richest fruits we cultivate, and so varied in its form, size, coloring, texture, and perfume, that all tastes can be suited. The tree, too, is so beautiful in its growth, so varied in its habit, in its foliage, in the color of its bark, and in many minor particulars, that a dozen specimens of as many varieties furnish material enough for a delightful study. We are now so rich in varieties, that we can have pears ten months in the year—from the middle of July until the first of May. Up to the present time, (Aug. 10,) six varieties have ripened in our grounds, and it may be interesting to some and profitable to others to have a description and some account of them. They are not all first rate—perhaps not second rate—not more than two of them, perhaps, could be recommended for general culture, or to the proprietor of a small garden, in our locality at least; but in certain localities, or under certain circumstances, the worst of them might be valuable and well worthy of culture.



AMIRE JOANNET. LITTLE MUSK. MUSCAT ROBERT.

Amire Joannet. (*St. John's, Early Sugar, &c.*)—*Fruit* small, varying from obovate to pyriform, regular, tapering to the stalk, which is long, straight and stiff, inserted without any cavity. *Calyx* open, large, not sunk. *Skin* greenish yellow, becoming lemon yellow at maturity. *Flesh* breaking, juicy, musky, and sweet. *Tree* upright, and of vigorous growth. *Young shoots* olive colored, with minute gray dots. *Leaves* large, roundish, flat, glossy, and rich, slightly toothed, and on very long and large petioles. Tree very productive, and succeeds well both on pear and quince stock. It is well worthy of a place in large gardens, not merely on account of its earliness, but because the tree is very beautiful, with its large, glistening foliage, and beautiful, bright, little, miniature pears. Ripens here from middle to last of July. This season it commenced to ripen on the 20th.

Little Musk. (*Little Muscat, Petit Muscat, Primitive, &c., &c.*)—There is scarcely a day of difference here between the ripening of this and the preceding, and very little difference in the quality. *Fruit* small, about an inch in diameter, regular, turbinate or top-shaped, tapering to the stalk, which is an inch to an inch and a half long. *Calyx* large, open, in a very slight depression. *Skin* greenish yellow in the shade, streaked and mottled with dull red in the sun, and sprinkled with yellow dots. *Flesh* yellowish, breaking, sweet, and juicy, with a pleasant musky flavor. *Tree* is an upright, fine, pyramidal grower, moderately stout. *Young shoots* glossy, of a reddish brown, with gray dots. *Leaves* small, oval, folded. *Petioles* reddish, long, and slender. Productive—bears in profuse clusters. We have this season seen upwards of thirty pears, good specimens and all ripe, on a single branch exactly twelve inches long.



DOYENNE D'ETE. MADELAINE. SKINLESS.

MUSCAT ROBERT. (*Gros St. Jean, &c.*)—We described this pear in Volume 11, page 218, but bring it forward now to make up a small group that ripen within a short period. *Fruit* rather small, very regular, top-shaped, tapering to the base of the stalk, which is about one and a half inches long, and fleshy at the base. *Calyx* open, in a very slight depression. *Skin* greenish yellow, becoming a pale lemon yellow at maturity, and delicately marbled with red on the side next the sun. *Flesh* white, breaking, juicy, very sweet, musky, and pleasant. Ripe from 1st to 10th of August. The *tree* is remarkably distinct and very beautiful, erect and vigorous in growth, with yellowish wood, in winter quite golden. *Leaves* large, flat, glossy, and pale yellowish green. Very productive. Makes a beautiful pyramidal or dwarf tree on the quince.

DOYENNE D' ETE. (*Summer Doyenne.*)—We gave a full account and description of this excellent and beautiful variety at page 217 of last year's volume. We introduce it now, in this group, for the purpose of saying that no variety yet cultivated, and ripening at the same time, equals it. Beautiful, melting, juicy, and delicious. Ripens better on the tree than any other variety we know of, but is richer if picked a few days before maturity. The tree is vigorous and handsome, bearing regular and most abundant crops. Ripe here this season on the 20th of July, and lasting till 10th of August. It is one of those varieties that succeed particularly well on the quince; but is so prolific, that unless pretty closely pruned every year, it will soon become enfeebled.

Madelaine. (*Citron des Carmes.*)—This is one of the best known and most generally cultivated of all our early pears. *Fruit* medium size, quite uniform. *Stalk* varying from one to two inches long, moderately stout. *Calyx* small, closed, in a shallow, somewhat wrinkled basin. *Skin* pale greenish yellow, with a few small reddish dots on the sunny side. *Flesh* white, melting, juicy, sprightly and fine flavored. Ripens here from 1st to 10th of August. *Tree* a vigorous and rapid grower both on pear and quince. *Shoots* long, dark olive. *Leaves* large, glossy, dark, slightly waved on the edges. Bears young and abundantly. Like the *Doyenne d'Ete*, although possessing great natural vigor, it bears so profusely on the quince that it requires close pruning to sustain its vigor.

Skinless. (*Sanspeau.*)—*Fruit* medium size, pyriform, largest near the base, but slightly contracted at the eye. *Stalk* long and slender, with a fleshy projection at the base. *Calyx* closed, and set in a shallow, furrowed basin. *Skin* thin, smooth, greenish yellow; cheek brown, with reddish dots. *Flesh* half melting, sweet, delicate, and finely flavored. Does not last long. *Tree* an upright, free grower, with slender, reddish brown shoots, and flat, glossy, wavy leaves, on long, slender footstalks. Bears regular and abundant crops, and fruit always fair. Ripens here about 1st of August.

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THE POMOLOGICAL CONVENTION.

On the 13th of the present month, this body assembles in Philadelphia. This will be its fourth session. The first was held in New York, in 1848, and the second in 1849, in the same place. The third was held in Cincinnati, in 1850, and was comparatively a failure, owing to the nonattendance of eastern and northern delegates, and a local misunderstanding in regard to the preliminary arrangements for the accommodation of the Convention. Four years have thus elapsed since the organization of the institution, and we may reasonably expect to see brought forward during the approaching session, some of the results anticipated by its originators. Committees were appointed in all the fruit-growing States of the Union, to collect information on everything concerning fruits and fruit-culture in their respective localities, and to arrange the same in the form of reports, to be laid before the Convention. We trust these committees have not been idle, but are prepared to present such an array of useful facts and statistics, in regard to the great business of fruit growing, as has never before been collected in this country. The last four years have been a period of wonderful activity in this department of industry. Never before were so many fruit trees planted in so short a time in this country, nor certainly in any other. Never before were so many persons actively and zealously making inquiries and investigations on the subject—in testing varieties, modes of propagation and culture, soils and manures, and the various theories and practices suggested by writers, and by the active imaginations of the most energetic, original, and inventive cultivators in the world. With all this we can not but anticipate a rich and varied fund of information, that will aid in clearing up some matters that are yet imperfectly understood, and give a fresh and healthy impetus to the art of fruit culture.

One thing we must take the liberty of suggesting to the committees, and that is, to exclude from their reports all extraneous or irrelevant materials, all common-place or general facts, all discussion of settled points, or descriptions of well known objects. Give all the information in your power in regard to your own localities, and your own, actual, downright experience. State the facts as briefly as possible, without an array of words to give it importance, but in fact robbing it of its value. What the people of Pennsylvania and Ohio and Maryland will wish to hear reported from Western New York, is that certain varieties succeed well and certain other varieties do not—that certain soils, modes of propagation and culture, give such and such results; and we in return, will expect similar information from them. We allude to this matter, because we know something of reports heretofore presented. We hope, too, that the same spirit will be manifested in the discussions. Whatever we may have occasion to say there, should be pointed and brief; for the time of a large body of working men, many of whom will be from a great distance, will be too valuable to be trifled with. The discussions at best are not so valuable or reliable as they might be; we look to the reports, carefully prepared and analyzed, as of much more importance.

One thing has always been very badly managed by these conventions, and that is the publication of their proceedings. The two New York meetings entrusted their transactions to the American Institute, and they were not permitted to see the light of day for full six months, and then not half the members were served with copies. The Cincinnati meeting did not manage much better. The proceedings were tardy in appearing, and were not remarkable for their accuracy when they did. With all this experience we do not doubt but that the Convention of 1852 will take such steps in the outstart as will secure a full, correct, and reliable report of all its proceedings published and placed in the hands of all its members without the least delay. Thus only will they be of any value, or awaken any interest in the community.

There will be, undoubtedly, a grand display of fruits. The later peaches of New Jersey and Delaware will be in perfection, and will be a most interesting item. The pears around Boston, we are glad to learn are unusually abundant and fine this season, and we anticipate in them a sight worth seeing. In Western New York our pear crop is perhaps the only thing in the way of fruits of which we can make any respectable show. We bespeak from all parts of the country a large attendance. Whatever good may otherwise result from it, that of making men, engaged in the same pursuit, acquainted with each other, and forming them as it were into a sort of brotherhood, will certainly not be least important.

The death of Mr. Downing, who was chairman of the General Fruit Committee, and one of the originators and master spirits of the organization, will throw its dark shadow over the meeting. Hundreds, like ourselves, but a week or two ago were in full expectation of meeting him there, of having the pleasure of his company, and of being instructed by the information he was collecting and preparing to impart. We understand that the Hon. Marshall P. Wilder will deliver the eulogy on Mr. Downing's life and character, before the Convention. It will be a most timely and appropriate proceeding.

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The Crescent Seedling Strawberry.—A very remarkable variety of strawberry, bearing this name, and said to have been originated in New Orleans, is just now noticed in the papers, and one nurseryman advertises them at $2 per plant. Our friend, R. G. Pardee, Esq., of Palmyra, describes it in the Rural New Yorker, as producing "a constant and abundant supply of large, high flavored, conical, dark red strawberries, from January to August inclusive, at the end of which time the old plants die out, and a few runners strike with which to renew the bed." The *Picayune* says "it bears *every day*, (!) and is in much request all over the country, Mr. Lawrence having obtained them himself by a happy system of *grafting* (!) *and crossing*." Mr. Pardee has not had this variety bear yet, nor has any one else in the north that we have heard of. We therefore advise people to keep cool until it has been well tested. The Alpine humbug has not yet been forgotten, and we very much apprehend that the "Crescent" may disappoint expectation in the same way. It is not wonderful that in the climate of New Orleans any strawberry under good culture and management should bear from January to August. Growth is so rapid, that young runners get into a bearing state before the old ones are exhausted. Give us the climate of New Orleans, and we will produce *Hovey's Seedlings* and *Burr's New Pine*, and all the rest of them, seven months in the year; but it can not so well be done at the north.

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RHUBARB.—We have reveived from Mr. B. P. CAHOON, of Kenosha, Wisconsin, two stalks of Rhubarb, each eighteen inches long, seven in circumference, and weighing together four pounds.

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GENESEE VALLEY HORTICULTURAL SOCIETY.—DEATH OF A. J. DOWNING.—At a special meeting of the Horticultural Society of the Valley of the Genesee, held in the city of Rochester, Aug. 12, 1852, the President, on calling the meeting to order, stated that he had called the members together at the suggestion of others, and in accordance with his own feelings, to express in some suitable manner the feelings of the members in regard to the sudden and melancholy death of A. J. DOWNING, who had been for many years an honorary member of this Society.

The Secretary being absent, JAS. VICK, JR., was appointed Secretary pro tem.

On motion of M. G. WARNER, a committee of five were appointed to prepare resolutions for the consideration of the meeting.

The President appointed M. G. WARNER, JAMES H. WATTS, H. E. HOOKER, GEO. ELLWANGER, and A. FROST.

The committee, through their chairman, reported the following Preamble and Resolutions, which were unanimously adopted:

Whereas, In the death of A. J. DOWNING American Horticulture has lost its noble and gifted standard bearer, and society one of its most amiable, accomplished, and useful members—who has done more than any other to awaken among the American people an appreciation of their country's resources, and to cultivate and diffuse a love for the beautiful in nature and art—whose writings, brilliant and powerful in style, and truly American in sentiment, have given us a Horticultural Literature which commands the admiration of the world,—therefore,

Resolved, That we regard his loss as one of the greatest that could in this day befall the American people in the death of any one man—that we deeply sympathize with his afflicted friends and relatives, truly "mourning with those who mourn" for the loved and lost.

Resolved, That though Mr. DOWNING is no more, and his voice is hushed in death, yet he still speaketh—his works will live after him, and his influence be felt while correct taste has a disciple or a home in the earth.

Resolved, That we recommend the Horticultural Societies of this country to take some united action to testify in a suitable manner their regard for the memory of Mr. DOWNING; and that a committee of three be appointed, to correspond with other Societies on the subject.

P. BARRY, L. WETHERELL, and JAMES H. WATTS, were appointed a committee in accordance with the resolution.

Resolved, That the proceedings of this meeting be furnished the various horticultural papers, with a request to publish the same, and a copy thereof be forwarded by the President of the Society to the family of the deceased.

The following delegates were appointed to attend the Pomological Congress to meet in Philadelphia on the 13th of September:

J. J. THOMAS,
P. BARRY,
A. FROST,
JAMES VICK, JR.,
JAMES H. WATTS,
ZERA BURR,
R. G. PARDEE,
JOSEPH FROST,
H. E. HOOKER,
GEO. CHERRY,
GEO. ELLWANGER,
H. P. NORTON.

In consequence of the meeting of the Pomological Congress in Philadelphia, on the 13th of September, the exhibition of the Genesee Valley Society was postponed until the 24th and 25th of September.

JAMES VICK, JR., *Secretary*. P. BARRY, *President*.

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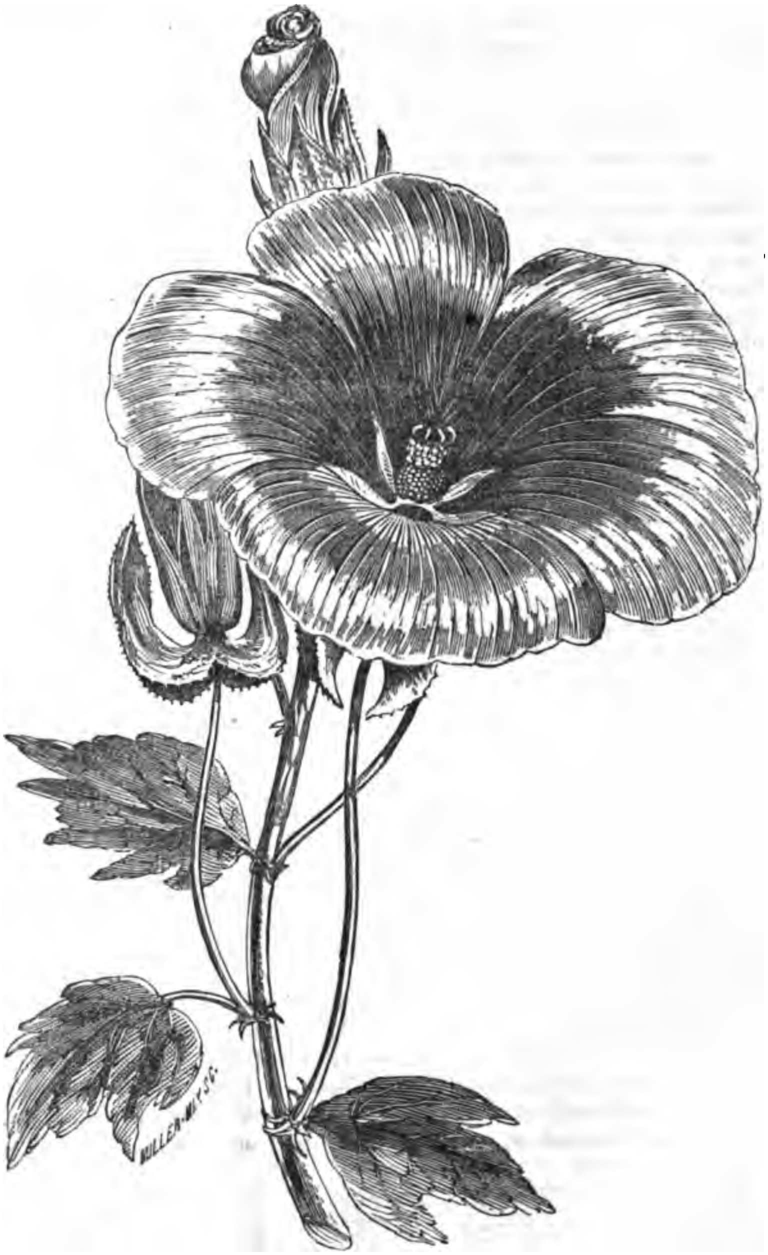
Ladies' Department.


MULLER-N.Y. SC.

MALOPE GRANDIFLORA.

FOREST FLOWERS.

BY THE AUTHORESS OF "THE BACK-WOODS OF CANADA."

WHILE you recommend to the attention of the daughters of your subscribers the cultivation of the flowers of the green-house and parterre, be pleased to speak a few words in behalf of the natives of the soil—I mean the lovely Wild Flowers—both as regards their cultivation and delineation on paper. I am a great admirer of the indigenous flowers of the forest, and it is with a feeling strongly allied to regret, that I see them fading away from the face of the earth. Many families, containing blossoms of the greatest beauty and fragrance are fast disappearing before the destructive agency of the chopper's axe, fire, and the plow. They flee from the face of man and are lost, like the aborigines of the country, and the place that knew them once, now knows them no more. I look for the lovely children of the forest, those flowers that first attracted my attention, but they have passed away, and I seek them in vain—another race of plants has filled their place. Man has altered the face of the soil—the mighty giants of the forest are gone, and the lowly shrub, the lovely flower, the ferns and mosses, that flourished beneath their shade, have departed with them. The ripening fields of grain, the stately plantations of Indian corn, with the coarser herbage of the potato and turnep, grasses and clover, have usurped their places—a new race of wild plants, suited to the new condition of the soil springs up, to dispute the possession of the ground with the foreign usurper. Where now are the lillies of the woods, the lovely and fragrant Pyrolas, the Blood-root, the delicate sweet scented Mitchella repens, the spotless Monotropa, with Orchis of many colors, and a thousand other lovely flowers? Not on the newly cleared ground, where the forest once stood, may we now hope to find them; we must re-enter the woods, their forest home—they die exposed to the fierce glare of the Canadian summer sun.

I cannot help regretting that none of our Botanical Societies have made any effort to preserve correct representations of these rare but evanescent beauties of the woods, by encouraging to any extent the pursuit of *botanical* flower painting among the amateur artists of the Colony. PURSH has given a few in his Flora, BURTON has many more, but still there are a vast number that find no place in any published work. Neither has there been sufficient attention paid to the correct delineation of form, or exact shade of color, to make them as attractive as they might be, and thereby increasing their value.

Now, Mr. Editor, there are doubtless many young and accomplished females who have been transplanted to America—many, too, among the natives of the U. S. and British America who would be glad to exercise this delightful talent amid the solitudes of the back woods, stimulated by the hope of acquiring fame, or a remuneration for time so employed. How valuable could a Canadian Flora, thus illustrated be made, provided that the subjects were faithfully delineated, with close attention to botanical structure, form and color. Have we any Canadian Flora devoted entirely to the vegetable productions of Upper and Lower Canada?

If I have trespassed too long upon your valuable time, pray forgive. If you think it would prove acceptable to your readers, (the ladies I assure you sometimes read the *Genesee Farmer* as well as their husbands and brothers,) I will from time to time send you a few scraps from my "Forest Gleanings"—about wild flowers and other matters connected with Canadian Natural History.—*Oaklands, Rice Lake Plains, C. W.*

Send us the promised Scraps from your "Forest Gleanings," by all means.—ED.

◆

MALOPE GRANDIFLORA.—This flower, a correct drawing of which we give on the preceding page, is one of the finest annuals that now beautify our garden. It belongs to the mallow family, several members of which are to be found in our fields and on the road-side. We shall preserve the seed for the benefit of the lovers of fine flowers.

Editor's Table.

Agricultural Fairs.—Below we publish all the agricultural Fairs to be held this fall that have come to our knowledge.

STATE FAIRS.

New York, at Utica,	Sept.	7, 8, 9, 10
Ohio, at Cleveland,	"	15, 16, 17
Michigan, at Detroit,	"	22, 23, 24
Canada West, at Toronto,	"	21, 22, 23, 24
Vermont, at Rutland,	"	1, 2, 3
Pennsylvania, at Lancaster,	Oct.	20, 21, 22
New Hampshire, at Meredith Bridge,	"	6, 7, 8
Indiana, at Indianapolis,	"	19, 20, 21
New Brunswick, at Fredericton,	"	5 to 9
Wisconsin, at Milwaukie,	"	6, 7, 8
Georgia,	"	18 to 23
Maryland, at Baltimore,	"	26, 27, 28, 29
American Pomological Congress, at Philadelphia,	"	13
American Institute, at New York,	"	5
" Exhib. of Stock,	"	19, 20, 21
Rhode Island Society of Improvement, at Providence,	Sept.	15, 16, 17
New England Society for Improvement of Poultry, at Boston,	"	7, 8, 9, 10

COUNTY FAIRS.

Saratoga, at Mechanicsville,	Sept.	15, 16, 17
Rensselaer, at Troy,	"	22, 23, 24
Clinton, at Keeseville,	"	22, 23, 24
Essex,	"	20, 21, 22
Suffolk, at Huntingdon,	"	22
Otsego, at Morris,	"	22, 23
Jefferson, at Watertown,	"	16, 17
Cortland,	"	15, 16
Greene, at Cairo,	"	21, 22
Columbia, at Chatham 4 Corners,	"	29, 30
Madison, at Eaton,	"	22, 23
Wayne, at Wolcott,	"	21, 22
do. at Palmyra,	"	28, 29
Rensselaer, at Troy,	"	22, 23, 24
Herkimer, at Herkimer,	"	28, 29
Ontario, at Canandaigua,		29, 30
Monroe, at Rochester,	"	29, 30
Wyoming, at Warsaw,	"	22, 23
Orange, at Middletown,	"	29, 30
Oswego, at Fulton,	"	29, 30
Onondaga, at Syracuse,	"	22, 23
Chemung, at Horse Heads,	"	29, 30
Chenango, at Norwich,	"	29, 30
Orleans, at Albion,	"	23, 24
St. Lawrence, at Canton,	"	15, 16
Seneca, at Waterloo,	"	30, 31
Genesee,	Oct.	6, 7
Cayuga, at Auburn,	"	6, 7
Putnam, at Carmel,	"	5, 6
Richmond,	"	17
Dutchess, at Washington Hollow,	"	5, 6
Westchester, at White Plains,	"	6, 7, 8

TOWN FAIRS.

East Bloomfield,	Sept.	22
Brookfield, Madison county,	"	29, 30
Cape Vincent, Jefferson county,	"	15
Bristol, Ontario Co., at Bristol Center,	"	16

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Fine Cucumbers.—Some friend sent us in the spring four cucumber seeds, which were represented as being very fine, only one of which grew. On this vine we now have a fine show, the cucumbers when fit to pick averaging fourteen inches in length and nine in circumference. They appear to be very similar to a variety we have seen in England, but of which we had not been able to procure seed.

New York State Fair.—The State Fair for the present year will be held at Utica, on the 7th, 8th, 9th and 10th of September. Persons may become members of the society by the payment of $1, which will admit himself and family to the exhibition during the continuance of the show. Single tickets, admitting one person, once, 12½ cents. Members of the society will be admitted to the grounds on Wednesday, the 8th, and on Thursday the grounds will be open to the public, and continue open two days.

Exhibitors must become members of the society, and have their articles and animals entered on the Secretary's books on or before Monday, the 6th September, and all articles and animals, except horses, must be brought into the enclosure as early as Tuesday noon, in order that they may be suitably arranged. Horses will be received early Wednesday morning, but must be entered previously. The Secretary desires all entries forwarded to him previous to the 4th of September, that he may be able to print a full Catalogue previous to the Exhibition.

Forage and water will be furnished for stock free of charge, and grain for pigs and poultry.

Persons desiring accommodations for stock will have provision made on application to **John Butterfield**, of Utica. Mr. B. will also take charge of all articles directed to his care, and provide for their delivery at the Show Ground, if notice is given and provision made for the expenses.

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A Quick and Pleasant Trip.—On the morning of the 19th ult., we left home at 6 o'clock in the morning, took a seat in the cars of the Niagara Falls Rail Road at half past six, and a few minutes after seven found ourselves very pleasantly located at the breakfast-table of our friend, H. P. **Norton**, of Brockport—enjoyed a very pleasant visit with Mr. N. and his amiable and intelligent wife, examined his fine garden, admired the beautiful flowers and well kept trees, feasted on his delicious summer pears, looked at Mrs. N.'s excellent currant wine, (only looked of course)—visited the model peach and pear orchards of **Austin Pinney**, of Clarkson, to see which are well worth a trip to Clarkson, and returned and wrote this article, before half past ten; thus having crowded about forty miles of travel and a week's enjoyment into four hours. We live very fast in these railroad times.

☞ In the *Horticulturist* for August we find the leading article on the destruction of the Ailanthus, on account of its real and supposed bad qualities. It is the last number issued before Mr. DOWNING's death, and this was perhaps the last article written by him, and has been read by his friends with a peculiar and mournful interest. In it we find the following remarkable paragraph, which with a little superstition we may imagine to be prophetic of his own untimely end:

> "We may take the opportunity to *preach a funeral sermon over its remains* that shall not, like so many *funeral sermons*, be a *bath of oblivion-waters* to wash out all memory of its vices. For if the Tartar is not laid violent hands upon, and kept under close watch, even after the *spirit has gone out* of the old trunk, and *the* CORONER *is satisfied that he has come to a violent end*—so we shall have him upon us tenfold in the shape of suckers innumerable."

◆

OREGON.—Oregon is destined to become one of the greatest States of this Union. We think there is more intelligence and public spirit in Oregon, in proportion to the population, than in any other State or Territory. We receive orders for books and papers by almost every arrival, in exchange for which we have have had some of the product of the territory—several interesting little bags of gold dust. We have over fifty subscribers at Salem, Marion Co., and large clubs at Lexington, Rainer, Oregon City, and other offices. Large numbers of fruit trees have been sent out from the Rochester Nurseries. Success to the farmers of the Pacific.

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MULTICAUL RYE.—Those who have inquired for the Multicaul Rye are referred to the advertisement of Mr. BIGELOW. Having procured some for the purpose, we will furnish our distant friends who may apply with small quantities through the mail.

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ADVERTISEMENTS, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance.*

◆

Inquiries and Answers.

GROUND MOLES.—I noticed in the July number of the *Farmer* an inquiry respecting the best method of destroying moles. The mole is a great scourge at the west, and annually destroys vast quantities of corn, and no remedy I have ever tried is entirely effectual. The plan that is adopted by many farmers, is to dissolve arsenic and soak corn in the solution, and drop it in the hill; but this is not always effectual. Another plan is to run a furrow between the rows. But I go patiently to work and stamp down all the roads, and watch them; and if a person is still, they will soon commence digging, when it is an easy job to catch them. The best time for this is in the morning, at noon, and at evening, and directly after a shower. I have often caught three or four in a day, without losing much time. If farmers would give a small reward for every mole caught on their premises, I think it would be an excellent way of getting rid of them. I know of some who have adopted this plan with complete success. J. W. LEWIS.—*Huntsville, Ind.*

There is much difference of opinion as to whether moles do harm or good. We are inclined to think that they do both. That they destroy a great many insects and grubs which are injurious to the crops, is certain; while at the same time they injure the plants by biting off the roots, &c., in making their interminable network of burrows. We have supposed they did not trouble our farmers so much as our correspondents state. There can be no doubt that they may be easily destroyed, *if it is desirable.* A trap could be made and placed in their burrows, which they traverse very frequently, rarely appearing on the surface. Or they may be poisoned by placing some worms in a vessel with carbonate of barytes, or arsenic, and letting them remain a few hours, afterwards placing a few of them in the burrows, and giving a fresh supply as soon as taken away. This plan has been often tried, and effectually destroys them.

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THE WHEAT WEEVIL.—Our wheat the present season has been injured by an insect. On examining the heads of wheat affected, a number of small maggots of a yellow color will be found preying on the grain, and in some heads it will be nearly all destroyed. Most of our farmers call this the weevil, but some say it is the effects of the Hessian fly. Can you give us any light? G. S.—*Canandaigua, N. Y.*

While attending the trial of Reapers at Geneva, we noticed that the wheat upon which the reapers were testing their powers was very much injured by the wheat fly, and as it became a matter of conversation among the many their congregated, we noticed that it was generally attributed to the weevil. As our correspondent requests, we will endeavor to throw a little light on the subject.

The *Wheat Weevil* is a beetle, and does its mischief in the granary. The female deposits her eggs upon wheat in granaries, and the young larvæ immediately burrows into the grain, of which it eats the interior. It is sometimes very abundant in old granaries. Perhaps the best way to destroy them is to starve them out by putting no wheat in the place infested by them for one season, and in the mean time make extraordinary exertions to ferret them out by cleaning, whitewashing, &c.

The *Hessian Fly* deposits her eggs on the young shoots of fall wheat in October. The worms, which are hatched in a few days, descend to the lower part of the stem near the earth, where they become changed into grubs having the appearance of flax seed, where they remain during the winter, destroying the plant by sucking its juices.

The *Wheat Fly* is the insect that does the mischief of which our correspondent complains.—They have somewhat the appearance of the musquito, of a yellow color, with clear wings. They are seen in June, when the wheat is in flower, and the eggs are deposited during the evening, in the scales of the chaff. The maggots are of a yellow or brownish color, and eat the young seed as it is formed. The maggots fall to the ground to change into chrysales, and come forth again the next summer. Lime and ashes at the rate of half a bushel each, sown on the grain as soon as they make their appearance, has been recommended, and may be of advantage, though we have had no experience in its use. After an invasion of these insects, burn the stubble, if possible, plow deep, and sow no wheat on the same field for two seasons

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HORTICULTURAL.

(Hamilton, Carlisle.) Weeping Willows.—Take off cuttings in the winter or early in spring; bury them till the ground is ready for planting. The cuttings may be one or two feet long, and of any thickness from one to three inches in diameter, but of young wood not over three years growth. Keep the ground clean about them, and at the end of the first season you will have a tree five or six feet high. If several shoots start from the cuttings, remove all but one, and that the strongest.

(J. R., Mayville, N. Y.) Fruit Room.—A circulation of air under the floor is not necessary, only let the location be a dry one.

(L. B., Freedom, Ohio.) Strawberries.—The strawberry you describe as making no runners, and bearing till frost comes, is the *Bush Alpine*, a most useful sort for the kitchen garden, worthy of much more attention than it receives.

(R. L. G., South Edmeston, N. Y.) Peach Trees.—Your trees were probably injured by the hard winter, or it may be that the worm had been operating on them. You cut them too low.

Apple and Pear Cuttings.—The experiment is not worthy of attention.

Soaking Seeds in Pepper.—You can not in this way give any particular flavor to fruits.

(A. B., Sharon.) Walnuts.—You can either graft or bud the English on the black walnut or butternut. Budding can be done in July, using the small buds at the base of the shoots. Grafting must be done late, as the walnuts are late in commencing to grow. Cut the scions in winter.

Quince Stocks.—Mr. Thomas, in the new edition of his work, recommends the *Angers Quince* as a stock.

(H. A., East Bethany, N. Y.) The Custard Apple, or Papaw.—We formerly propagated this tree and kept it for sale, but there was so little demand for it that we have dropped it. It is a beautiful tree, and the fruit is pleasant to some people's taste. It flourishes in any good soil, such as we plant other fruit trees in. It grows along the waysides in Ohio, in great quantities. We noticed it particularly abundant along the Little Miami Railroad.

Persimmon, or Date Plum.—This fruit is hardly worth cultivating in New York. We have eaten them from the tree in Maryland, in the winter, after they had been frozen, when we relished them very much.

EMERY & COMPANY'S

RETAIL PRICE LIST of Horse Powers, Threshers, Separators, Saw Mills, Feed Mills, Fanning Mills, &c., &c., manufactured by themselves, and delivered on board any conveyances at Albany, N. Y., or at any place in the United States, by the addition of freight:

Emery's Patent Changable Power, Thresher, Separator, and Bands complete, for 2 Horses,	$150
" " " 1 Horse,	120
Emery's Improved Wide Rack & Pinion, with Thresher, Separator, and Bands, for 2 Horses,	120
" " " " 1 Horse,	95
Common or Wheeler Rack & Pinion Power, Thresher, Separator, and Bands, for 2 Horses,	135
" " " 1 Horse,	110
If sold separately, the following prices are charged:	
Emery's Changeable R. R. Horse Power, for 2 Horses,	110
" " " " 1 Horse,	80
Emery's Wide Rack and Pinion Power, for 2 Horses,	90
" " " " 1 Horse,	60
Common or Wheeler Rack & Pinion Power, 2 Horses,	95
" " " " 1 Horse,	75
Thresher with cylinder 26 inches long, 14½ in diameter, together with Separator and Fixtures,	35
Fanning Mills with pulleys for Band, $26, 28,	30
Portable Circular Saw Mill, 24 inch saw filed and sett, for sawing railroad wood, slitting fencing, &c.,	35
Upright or Felloe Saw for Wheelrights,	40
Churning attachment for driving one or two churns at a time of barrel size, except churns,	12
Sett Bands, Wrenches, Oil Can, and Extras,	5
Cross Cut Saw arrangements for butting and cutting off logs, including saw, guides and connections for use,	12
Feed Mill, cast iron plates,	35
French Burr Stone Mill for Grinding, 18 inch diameter,	100
" " " " 20 "	125
Power Corn Sheller, for 1 or 2 Horses,	35 to 50

Terms—Cash, or approved notes or acceptancies with interest, payable within four months in Albany, New York, Boston, Philadelphia, or Baltimore, as may best suit the purchaser.

All articles warranted made of good materials, and to operate as represented, or may be returned within three months at the expense of manufacturers for home transportation, and purchase money refunded—the purchaser being his own judge in each case. For further particulars, see previous advertisements, or address the subscribers. Liberal deduction to dealers. Local Agents wanted to sell and put the above in operation.

EMERY & CO.,
June, 1852. 369 & 371 Broadway, Albany, N. Y.

FRUIT AND ORNAMENTAL TREES.

ELLWANGER & BARRY desire to call the attention of nurserymen, dealers, and planters, to the immense stock of trees now on their grounds, embracing Fruit Trees of every description, viz:

STANDARD APPLES, PEARS, PLUMS, CHERRIES, PEACHES, &c., on free stocks, for orchards, vigorous and well formed.

DWARF AND PYRAMIDAL PEAR TREES, on quince stocks. About 100,000, embracing every fine variety that can be so worked, two year old trees, low branched, vigorous and beautiful.

DWARF AND PYRAMIDAL CHERRIES, on Mahaleb stocks. Fine one, two, and three years old trees, well branched and finely formed.

DWARF APPLE TREES, on Paradise and Doucain stocks. Beautiful two year old trees, with heads, for immediate bearing—besides vigorous yearlings.

GOOSEBERRIES.—Large Lancashire sorts. Strong plants for immediate bearing.

CURRANTS.—Including the *Cherry*, *Victoria*, *White Grape*, and many other new and fine sorts. See our catalogue.

RASPBERRIES.—The new *Large fruited Monthly*, *Fastolff*, *&c.*, *&c.* A complete collection of all desirable varieties.

GRAPES.—Hardy, native sorts—*Isabella*, *Catawba*, *Clinton*, *&c.*—strong two and three year old vines. Thirty varieties of Foreign Grapes, for vineries—strong, thrifty plants, in pots.

STRAWBERRIES of all desirable varieties, and all other fruits cultivated.

RHUBARB.—Genuine *Myatt's Victoria*, *Myatt's Linnæus*, *Mitchell's Royal Albert*, *Downing's Colossal*, and hybrids of the above, of our own raising from seed, quite equal to any of them.

The entire fruit department is under our own personal supervision. The best quality of stocks is used, and the most scrupulous attention given to ensure accuracy. We flatter ourselves that no nursery collection can offer a stronger guarantee to purchasers, in this respect. The stock is all grown on new, fresh soil, and is healthy, well matured, and hardy. We ask purchasers to examine it.

ORNAMENTAL.—Large trees, for streets, parks, &c., such as *Horse Chestnuts*, *Silver Maples*, *Sugar Maples*, *Snowy Abeles*, *Mountain Ash*, *Elms*, and *Tulip Trees*, in large quantities, cheap.

RARE ORNAMENTAL LAWN TREES—embracing the most novel, remarkable, and beautiful trees and shrubs, both deciduous and evergreen, that can be grown in our climate. For particulars we must refer to the descriptive catalogue.

ROSES.—One of the richest collections in the country, including the newest and best European varieties, selected by us in person, last summer.

BULBOUS ROOTS—imported annually from Holland.

DAHLIAS.—The new English and French prize sorts of 1851, besides fine older ones.

All articles packed in the best manner, and forwarded to any part of the United States, Canada, or California.

Orders strictly complied with in every particular.

The following catalogues are sent *gratis* to all who apply and enclose stamps to cover postage, which must be prepaid:

No. 1. A Descriptive Catalogue of Fruits.

No. 2. A Descriptive Catalogue of Ornamental Trees, Shrubs, &c.

No. 3. A Catalogue of Dahlias, Fuchsias, Chrysanthemums, and bedding plants.

No. 4. A Wholesale Catalogue, for nurserymen and others who wish to purchase largely.

Postage on Nos. 1 and 2—500 miles or under, 3 cts.; 500 to 1500 miles, 6 cts. Postage on Nos. 3 and 4—500 miles or under, 1 cent; 500 to 1500 miles, 2 cts.

Mount Hope Nurseries, Rochester, N. Y., Sept., 1852.

Fruit Trees and Seedling Stocks for Sale.

20,000 one year old Cherry stocks. Fine and strong.
15,000 do. Plum do. do. do.
with a few thousand two year old Apple, Plum, and Cherry seedlings.

Also, a general assortment of Apple, Pear, Plum, Cherry, and Peach trees. The stock of Apple trees is particularly fine, and embraces all the leading varieties, such as Baldwin, Rhode Island Greening, Newtown Pippin, Esopus Spitzenburgh, Northern Spy, and others in large quantities.

Terms as reasonable as at any other establishment, and trees delivered at the steamboat landing at Hudson, or at the depot of Hudson River or Hudson and Berkshire railroad. E. G. STUDLEY.

Claverack, Col. Co., N. Y.—9-1t*

SYRACUSE NURSERIES.

THORP, SMITH, HANCHETT, & CO., PROPRIETORS.
SYRACUSE, N. Y.

OUR nursery grounds, among the largest and most extensive in the country, are now covered with a most beautiful stock of Fruit and Ornamental Trees Shrubbery, Roses, Green-house Plants, &c. We therefore invite particular attention to our stock of trees, which can not be excelled in size, thriftiness, and beauty, by those of any other establishment in the Union. Nurserymen, Amateurs, Orchardists, and Venders, are earnestly invited to call, examine, and judge for themselves.

APPLES.—We have a very extensive assortment of all the very best varieties in cultivation, both Dwarf and Standard.

PEARS.—Our stock of Standards and Dwarfs is much better than heretofore; and we invite competition, as none finer can be produced. We have also a few dwarfs five years old, filled with fruit spurs, and which have borne freely the past two years. (and now with a full crop,) that we will supply to those persons desiring fine fruit-bearing trees.

CHERRIES—Both Standard abd Dwarf, of all the newest and finest sorts, which can not be excelled for beauty and thriftiness.

PLUMS, PEACHES, APRICOTS, NECTARINES, CURRANTS, (including the *Victoria* and *Cherry*,) and ENGLISH GOOSEBERRIES, of all the best leading sorts.

Our ORNAMENTAL TREES are of fine form and luxuriant growth, and require only to be seen to be admired.

EVERGREENS.—A fine assortment of *Norway* and *Balsam Firs*, *Spruces*, *&c.*

PÆONIES.—A splendid assortment of both tree and herbaceous varieties.

DAHLIAS.—Over 150 choice selected kinds, at 25 cents for whole roots.

ROSES.—One of the largest stocks in the country, of all the leading varieties, being about 10,000 plants.

BULBOUS ROOTS.—A splendid assortment, just imported from Holland, of best double *Hyacinths*, *Tulips*, *Crocus*, *&c.*, *&c.*

GREEN-HOUSE PLANTS.—A large collection of the choicest and newest kinds, including the new *Heliotropes Reptans*, *&c.*, *Lantana Ewingii*, *Hoyas*, *Imperialis*, *Bella*, *Bidwelliana*, *&c.*

FUCHSIAS in 50 varieties, including *Spectabilis*, *Eliza Millize*, *Sir John Fastolff*, *Serratifolia*, *Prince of Orange*, *Carolina*, *Pearl of England*, *&c.*

CHRYSANTHEMUMS.—A full assortment of all the best standard kinds in the country. Of the *New Dwarf and Daisy* varieties we have everything new and rare, including 30 of the very best sorts.

VERBENAS.—A splendid collection of 50 varieties, including *Hovey's New Seedlings*.

STRAWBERRIES.—All the best varieties, including the 3 new Cincinnati sorts, one of which took the $100 premium.

HEDGE PLANTS.—*Buck Thorn*, *Privet*, *Red Cedar*, and *Osage Orange*.

SEEDLING STOCKS.—Nurserymen and others can be supplied with Apple, Pear, French Quince, Mahaleb, Doucain, and Paradise stocks, by giving us notice in due time.

Our Catalogues, with full descriptions and prices, will be forwarded to every post-paid applicant enclosing one letter stamp, if under 500 miles, and three stamps if over that distance.—9-2t. THORP, SMITH, HANCHETT, & CO.

FRUIT & ORNAMENTAL TREES.

RIVER BANK NURSERY, ROCHESTER, N. Y.

SHEPPARD & CHERRY, PROPRIETORS,

NOW offer to furnish nursery stock generally, of as good quality, and at as low rates, as can be obtained elsewhere.

FRUITS of all the leading varieties, both standard and dwarf, of Apples, Cherry, Peach, Pear, Plum, &c., &c. Gooseberries, Currants, Raspberries, Strawberries, &c. Grapes—*Isabella*, *Catawba*, *Clinton*, *&c.*

Also 100,000 apple stocks, for root grafting. 20,000 Cherry stocks, root pruned.

All orders accompanied with cash or satisfactory reference, and all letters of inquiry post-paid, will receive prompt attention.

From the connection of Mr. Sheppard for a number o years with the following establishments, all of which sustain the highest reputation, viz: A. J. Downing and A. Saul, Newburgh, N. Y.; Wm. Reid, Elizabethtown, N. J.; and Ellwanger & Barry, Rochester, N. Y.; the proprietors flatter themselves that their knowledge of the great variety of tastes and wants of planters generally, will enable them to guarantee ample satisfaction to all favoring them with their patronage. [9-2t.]

C. J. RYAN & CO.,

PROPRIETORS OF THE ROCHESTER AND CHARLOTTE PLANK-ROAD NURSERIES,

Rochester, N. Y.,

OFFER for sale, as follows, at moderate prices:

10,000 Apple trees, from five to eight feet high, four years old. All the principal early and late sorts. Also, Pear, Peach, Plum, and Cherry trees—all thrifty and in good order for transplanting.

20,000 Raspberries, including all the popular market varieties.

5,000 Isabella Grape vines, three years old, propagated from cuttings, not from layers—will bear fruit at once.

1,500 Apricot trees—large and thrifty—full of fruit buds.

50,000 Cherry seedlings, (Black Mazzard,) in fine order. They will all bud next year.

25 distinct varieties of Strawberries, among them the principal productive and high flavored sorts.

10,000 Rhubarb Roots. Downing's Collossal, Giant, and Myatt's Victoria.

100,000 Giant Asparagus roots, two and three years old.—Every family ought to have a bed of this delicious vegetable of the easiest culture.

Sea Kale and Horse Radish.

Hedge Plants, such as Privet, Osage Orange, and Buckthorn, one and two years old.

Our Ornamental trees are straight and handsome. All the most desirable varieties under cultivation.

Shrubs, Running and Shrubby Roses, Ornamental Vines, &c., &c., cultivated largely, and will be sold low.

☞ Our nursery land is principally a mellow, sandy loam, which furnishes our trees with tufts of fibres, and gives them a decided advantage over trees cultivated in stiff clay or wet land, which generally produces long, bare roots, without fibres.

All orders addressed to us, as above, will be promptly attended to.

See our General Descriptive and Annual Catalogues, which will be sent gratis to all post paid applicants.

☞ The extensive pear, peach, cherry, and apple orchards connected with these nurseries, give them facilities which are seldom equalled in the propagation of nursery stock. All our scions and buds are cut from bearing trees; and if there is a possibility of having fruit trees accurate to name and description, we have every facility for doing so.

September, 1852.—9-2t.

Prices of Manures.

Peruvian Guano, 2¼ to 2½ cts. per lb.

Improved Superphosphate of Lime, (Mapes,) 2½ cts. per pound.

Superphosphate of Lime, (Extra No. 1, Duburgh's,) 2½ cts. per lb.

Bone dust, when taken in equal quantities, $2.25 per bbl.

Bone sawings, separately, $2,50 per bbl.

Wood's Renovating Salts, 1 cent per lb.

Sugar-House Bone Black, $3 per hhd.

Potash, 3½ to 4 cts. per lb.

Charcoal, pulverized, $1 per bbl.

Sulphuric acid, 2¼ to 2½ cts. per lb.

Plaster of Paris, $1 to $1.25 per bbl.

For sale at the State Agricultural Warehouse, No. 25 Cliff street, New York. LONGETT & GRIFFING.

September, 1852.—9-2t.

Field Seeds.

AUSTRALIAN WHEAT—very superior. The berry of this grain is extra large, and makes the best of flour. It produces a greater average crop than any other variety now grown in New York. Several years' experience in its cultivation, proves that it is less liable to rust or mildew than other kinds; and as the stalk is large and strong, it is also less liable to blow down or lodge. Price, $4 per bushel. Other varieties of wheat, such as the White Flint, Mediterranean, Black Sea, &c.

BUCKWHEAT, of the best kinds in market.

RUTA BAGA, or Swedish Turnep Seed. The Purple Top and other superior varieties.

TURNEP SEED—Large White Flat, Long White, Red Top Flat, Yellow Aberdeen, Yellow Stone, and other improved kinds for the field or garden. A. B. ALLEN & CO.,

June, 1852.—6-tf. 189 & 191 Water st., New York.

Northern N. Y. Live Stock Insurance Company, Plattsburgh, N. Y. For terms, please apply to agents of the Company.

Fruit Trees, Seedlings, &c.

T. C. MAXWELL, & CO.,

GENEVA, N. Y.

ENCOURAGED by the generous patronage heretofore received, and by a *soil*, *climate*, and position peculiarly favorable to the growth of *healthy* trees, we have so enlarged our stock of nursery articles that we are now enabled to offer great inducements to all who may wish to purchase either at wholesale or retail. We have between five and eight hundred thousand trees in the different stages of growth, which have been propagated with the strictest care as to *merit* and *genuineness* of varieties.

Orders by mail, or otherwise, promptly attended to, and trees securely packed and delivered at the railroad depot or steamboat.

Of large trees we offer, this fall, the following, viz:

80,000 Apple trees. Best varieties for market or family orchards.

80,000 Cherry trees. Very thrifty and handsome.

6,000 Pear trees. Standards. Healthy and large.

20,000 do. Dwarfs, on true Angers Quince, one and two years old.

10,000 Peach trees. Very nice.

4,000 Plum trees. Five to seven feet high—best sorts.

2,000 Apricot trees. Mostly Dubois' Early Golden.

2,000 Grape vines. Mostly Isabella.

10,000 Evergreens. Balsam Fir, Cedars, Norway Spruce, &c., &c.

5,000 Mountain Ash. Large and fine. *Very cheap.*

8,000 Horse Chestnut. Large and handsome.

40,000 Cherry seedlings. Very nice.

20,000 Apple do. Two years old.

25,000 Buckthorn seedlings. Very nice for hedges.

Also, Hybrid Perpetual, Climbing, and Moss Roses, Shrubs, Gooseberries, Currants, Raspberries, Strawberries, &c., &c.

Particular attention is called to our large stock of the following fruits, viz:

APPLES.—Wagener, Tompkins Co. King, Northern Spy, Primate.

PEARS.—Vergalieu, Bartlett, Louise Bonne de Jersey, Glout Morceau.

CHERRIES.—Great Bigarreau, Black Tartarian, Bauman's May, Early Purple Guigne.

APRICOTS.—Dubois' Early Golden, Moorpark.

Geneva, Sept., 1852. T. C. MAXWELL & CO.

The best Railroad Horse Power, Thresher,

AND SEPARATOR (or riddle) in use, is made and sold by the subscribers, at Central Bridge, Schoharie Co., N. Y. We have made some valuable improvements this season, (for which a patent has been applied for,) which makes it superior to anything of the kind in use, as was fully established at the late trial of agricultural implements at Geneva, where it was placed in competition with several others, among which was Emery & Co.'s of Albany. We threshed at that trial more than one-half as fast with two horses, as was done with the best eight-horse lever power there.

Our price, delivered at the canal or railroad, is, for Horse Power and Machine, $150 three months without interest, or $140 cash.

These machines are warranted to suit the purchaser, or he can return the machine and have his money (if paid) refunded.

They are for sale by J. Rapalje & Co., Rochester, and by J. S. & W. C. Prouty, Geneva, N. Y.

Sept., 1852.—9-1t* G. WESTINGHOUSE & CO.

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no farther preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

SUPERIOR GRAIN DRILL.

MANUFACTURED BY

Bickford & Huffman, Macedon, Wayne Co. N. Y.

THE above celebrated Machine has, during the past year, been more extensively introduced than any year previous, and what is most gratifying to the manufacturers, they have given most unqualified satisfaction. Double the usual quantity has been sold during the past year, mostly of nine tubes, without supplying the demand for them.

After several years experience, with our present increased facilities for their manufacture, together with some additional improvements in their construction, they are now offered to the public with increased confidence in their superiority over all other Grain Drills now in use. The grain is distributed by the means of a cylinder operated by different sized geer wheels for the purpose of distributing the quantity desired. We are manufacturing them with the drill tubes differently arranged, some with two parallel rows, the front row being seven inches forward of the back row, sowing the rows seven inches apart, thereby facilitating the passage of the drill tubes among stones and clods. Others are arranged in one row, eight inches apart; or we will manufacture them to order with the tubes arranged any distance apart required. Those ordering drills will please be particular and mention the kind they prefer. Of the great number sold, not *one* has been returned, although each is warranted to sow all kinds of grain with accuracy and satisfactory to the purchaser, and to be made in a workmanlike manner. Subject to this warrant, we respectfully solicit the patronage of the public, with a full conviction that they will be fully satisfied, on a fair trial, of the merits of this useful implement.

Orders for drills should be sent in early, directed to us, or to

DANIEL SUPPLE, Dundee, N. Y.;
ALFRED HALE, Alloway, N. Y.;
H. W. LEVANWAY, Lock Berlin, N. Y.;
C. L. MARSHALL, Sparta, N. Y.;
AMOS WILLITS, Aurora, N. Y.;
JOHN KING, Genoa, N. Y.;
JOHN C. HALL, Hornersville, N. Y.:
McLALLEN & HESLER, Trumansburg, N. Y.;
Col. J. M. SHERWOOD, Auburn, N. Y.;
WATERMAN & JACKSON, Vienna, N. Y.;
JAMES H. GLASS, Geneseo, N. Y.;
DAVID VER VALIN, Poughkeepsie, N. Y.;
J. H. BUTTERFIELD, Utica, Mich.;
B. B. DEXTER, Batavia, Ill.;
A BNER WING, Geneva, Wis.

Price of Drills—$65 for seven tube Drills; $75 for nine tube Drills, delivered at the Canal or Railroad.

All orders thankfully received and promptly attended to.

BICKFORD & HUFFMAN.

SEYMOUR'S GRAIN DRILL.

THIS machine proves to be better adapted to the purpose for which a Grain Drill is wanted, than any other now in use. It is not only capable of sowing wheat, but all grain and seeds, from peas, corn, and cotton, to grass and clover seeds, either *broadcast or in drills;* and fine fertilizers, such as lime, plaster, guano, poudrette, bone-dust, &c., may be mixed with the grain if desired. These may all be sown broadcast with the same machine.

This machine is manufactured and for sale at East Bloomfield, Ontario County, N. Y., at the shop of P. Seymour. Also, at the shop of C. Seymour, York, Livingston County, and for sale by E. D. HALLOCK, No. 50 State street, Rochester, N. Y. Persons wishing to purchase will please call and examine at either of the above places. All orders promptly attended to.

C. H. SEYMOUR,
Sept., 1850. East Bloomfield, N. Y.

$1000 CHALLENGE.

I OFFER to place one thousand dollars cash in the hands of a party chosen, against one thousand to be paid into the hands of the same party by any manufacturer of Threshers in the United States, if a machine can be found that will thresh and clean fit for market or seed, with the aid of *only two horses*, 100 bushels of wheat and rye in less time than I can with my "Excelsior Wrought Iron Cylindrical Thresher and Cleaner." The grain to be thoroughly threshed, without white caps, or broken, and the straw delivered long enough to stack, and free from chaff. The winner to receive the $2000 with both machines and powers. For circulars, address Joseph G. Gilbert, 216 Pearl street, New York.

Gilbert's Patent Portable Excelsior Wrought Iron Thresher and Cleaner will thresh and clean grain fit for market at the rate of one-half to three-fourths of a bushel per minute, with two horses.

Urmy's Patent Railroad Power is the most durable and the cheapers power to be obtained.

Urmy's Double-geared Lever Power, for 2 to 8 horses.

Urmy's Patent Cornstalk Cutter and Grinder.

Urmy's Patent Seed Drill. Over 2000 of these machines have been sold, and have given general satisfaction.—County rights for sale for $100 and upwards, and castings furnished to manufacture at cost prices. Profits 100 per cent. For particulars, address, post paid,

J. G. GILBERT,
August, 1852.—8-1t*$2. 216 Pearl street, New York.

Valuable Virginia Land for Sale.

I OFFER for sale between 700 and 800 acres of land, handsomely located in Prince George county, Va., lying immediately on Chipoaks creek, adjoining Lower Brandon plantation on the south, 25 miles from Petersburg. About 200 acres are cleared, and the balance tolerably well timbered with oak and pine. The cleared land was marled several years ago, and 1000 bushels of marl with 1500 bushels of lime have been recently applied to it.

The improvements are, a good brick house with five rooms, (from which there is a beautiful prospect of James river,) a kitchen, stable, smoke-house, a barn with stationary horse-power attached, and a well of good water. The buildings are within 800 yards of the main landing, where vessels load with produce, wood, &c., and unload lime at 7 cts. per bushel. Marl abounds on the opposite side of the creek. The whole tract is well watered by springs and brooks, that run through fine meadow lands, a part of which are cleared.

I will sell it entire, or in parcels to suit purchasers, as it can be advantageously divided into four farms. If not sold privately (of which due notice will be given) before the 30th day of September next, I will sell it upon the premises, on that day, at public auction, without reserve.

Persons wishing to view the property will leave the Richmond and Norfolk boat at Lower Brandon Wharf, on James River, three miles from the property; or I will give any information to those addressing me (post-paid) at Cabin Point P. O., Surry County, Va.

August 1852.—8-2t. E. T. FETTER.

Improved Stock.

CATTLE of the Durham, Devon, Hereford, Alderney, and Ayrshire breeds.

SHEEP of the Native and French Merino, Saxony, South Down, and Cotswold.

PIGS of the Lincoln, Suffolk, and Berkshire breeds.

From our long experience as breeders and dealers in the above kinds of stock, and our excellent situation for purchasing and shipping, we think we can do as good justice to orders, as any other house in the United States.

A. B. ALLEN & CO.,
April 1, 1852—tf. 189 and 191 Water st., New York.

Great Sale of Superior Thorough-bred Short-Horn Cattle.

THE subscriber will offer for sale his entire herd of choice Short-Horns, comprising 50 head, young and old, at public auction, on Wednesday, the 18th of October, 1852, at 1 o'clock P. M., at his farm, 2½ miles from the city of Troy; reserving to himself one bid on 5 cows and heifers and one bull, say six head in all, and these to be pointed out previous to the commencement of the sale. This bid will be made public when the six animals are brought to the stand for sale. Should any gentlemen advance on the single bid made by the proprietor, the highest bidder will be entitled to the animal. It is proper to say, the severe drouth in this vicinity reducing the hay crop one half, has decided the proprietor to make this sale at the time named, instead of next June, which he had purposed to do.

The well established reputation of this herd in this Union, and in Canada, and the splendid herd it has measurably sprung from, viz: the famed herd of that eminent English breeder, the late Thomas Bates, Esq., renders it hardly necessary to comment upon its superior merits. It may not however be inappropriate to remark, that the establishment of this herd was commenced in 1838, and that the most careful attention has since been paid to its breeding, and that it now contains mostly all the reserved stock of two former public sales. Since 1840, the proprietor has imported from the late Mr. Bates, and his friends and late tenants the Messrs. Bell's, 7 head of Short-Horns. And besides these, he has now on the passage across the Atlantic, shipped 21st June, on board the packet ship Kossuth, Capt. Jas. B. Bell, a superior yearling roan bull, having many crosses of the famed Duchess bulls of Mr. Bates. Including this latter animal and the two beautiful red roan 8 year old heifers which came out from England last September, "Yarm Lass" and "Yorkshire Countess" and the beautiful heifer calf of the latter animal, got in England by the Duchess bull "5th Duke of York," there will be 14 head of this imported stock, and its immediate descendents. There has been sold from this herd but 8 heifers from these importations, and these cows were sold at $800 each. All the young bulls bred from these cows, except those now offered for sale, have also been sold at private sale, at $300 each, most of them while quite young.

Besides these 14 head of high bred animals, the noble premium cow "Esterville 3d," bred by E. P. Prentice, Esq., of Albany, and her equally fine 2 year old, red and white heifer bred by me, got by the Bates bull "Meteor," and 8 of the famed milking Willey tribe, the same tribe of cows as the heifer "Ruby," sold by me to Mr. S. P. Chapman, of Madison county, and which cow was awarded the first premium by the N. Y. State Ag. Society, for producing the largest quantity of butter in ten days in June and ten days in August, on grass pasture only, being a fraction over 40 lbs. in those 20 days. There are other valuable tribes in the herd, as the printed catalogue will show.

The catalogue will be ready for distribution about the 1st of August, and will exhibit richness of pedigrees rarely to be met with, showing the descent of the most of the animals from the best animals on record in the English herd book. Having received an invitation from H. Strafford, last winter, to forward a list of the pedigrees of my herd, to be inserted in the forthcoming volumes of the English herd book of which Mr. Strafford is now the editor, several pedigrees were sent to him of the animals here offered for sale, and will appear in said book. Gentlemen are invited to examine the herd at any time.

A credit of 9 months will be given on all sums up to $800, and 9 and 18 months on all sums over $800, for approved paper, with interest, payable at some bank in this State.

Troy, N. Y., August, 1852,—8-3t. GEO. VAIL.

Albany Tile Works,

No. 60 Lancaster St., West of Medical College.

THE subscriber has now on hand, and is prepared to furnish to Agriculturists, Horse-Shoe and Sole Tile, for land drainage, of the most approved patterns. They are over 1 foot in length, 2¼ to 4½ inches calibre, from $12 to $18 per 1000 pieces—being the cheapest and most durable article used. Orders from a distance will receive prompt attention. [4-6t] JOHN GOTT, Jr.

Mansfield's Clover Seed Hulling and Cleaning Machine

WAS awarded, at the Ohio State Fairs 1850 and 1851, the first premiums, Diploma and Silver Medal. Warranted to hull and clean from 20 to 40 bushels seed per day, or from two to five bushels per hour. Cash price of machine $95. Manufactured and for sale by M. H. MANSFIELD,

August, 1852.—8-2t* Ashland, Ohio.

The Water Cure Journal.

A NEW VOLUME commences with the present July number. Published monthly. Illustrated with engravings exhibiting the structure, anatomy, and physiology of the human body, with familiar instructions to learners. It is emphatically a Journal of Health, designed to be a complete Family Guide in all diseases.

TERMS.—Only One Dollar a Year, in advance. Please address, post paid, FOWLERS AND WELLS, No. 131 Nassau street, New York.

A few brief Editorial Notices may be acceptable to those unacquainted with the Journal. We copy:

From the New York Tribune.

"The Water Cure Journal holds a high rank in the science of health; always ready, straight-forward, and plain-spoken, it unfolds the law of our physical nature, without any pretensions to the technicalities of science, but in a form as attractive and refreshing as the sparkling element of which it treats."

From the Fountain Journal.

"Every man, woman, and child, who loves health, who desires happiness, its direct result, who wants to 'live while it does live,' 'live till he dies,' and really live, instead of being a mere walking corpse, should become at once a reader of this Journal, and practice its precepts."

From the New York Evening Post.

"THE WATER CURE JOURNAL.—This is, unquestionably, the most popular health Journal in the world."

THIS HYDROPATHIC JOURNAL now enters upon its Fourteenth Volume, with a circulation of FIFTY THOUSAND COPIES. The ablest medical writers are among its contributors, and all subjects relating to the Laws of Life, Health, and Happiness, may be found in its pages. Now is the time to subscribe. [8-2t]

Hallock's Agricultural Warehouse,

No. 50. STATE ST., ROCHESTER, N. Y.

THE Subscriber, late from the Agricultural Works, Warehouse, and Seed Store of Messrs. Emery & Co., Albany, (where he has been engaged for the past six years,) has been induced to establish an Agency for the sale of their justly celebrated Premium Horse Powers, Threshers, Separators, &c., in Rochester. Particular attention will be paid to selling and putting up the Horse Powers, and other fixtures for threshing, &c. A thorough knowledge of these machines enables him to put them up more satisfactorily than has been done heretofore. Price and terms same as at Albany, transportation added.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in Rochester, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public. E. D. HALLOCK.

July, 1852.

Emery & Co.'s Improved Horse Powers, Threshers, and Seperators.

THE undersigned have been appointed sole agents for the sale of Emery's new Patent Improved Horse-Powers, Threshers, and Separators, in the city of New York. The State Agricultural Warehouse is the only depot where this superior Power can be had.

LONGETT & GRIFFING,

7-tf. State Ag. Warehouse, 25 Cliff st., New York.

Prices of Agricultural Products at the Principal Markets in the United States. — Aug. 30, 1852.

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Philadelphia.	
Beef, per 100 lbs....	$7.00 a	9.00		a $7.25	$5.50 a	6.00	$6.00 a	6.50				
do mess, per bbl..	14.00	17.50	17.00	18.00	10.00	10.50	8.00	10.00			$13.00 a	13.00
Pork, per 100 lbs....					7.00	7.50	5.00					
do mess, per bbl.	18.50	19.87½	20.00	24.00	16.00	19.00	16.50	17.00		$20.00	19.75	20.00
Lard, per lb........	11½	12½	12	13	9	10	7	9	10 a	11	11½	12½
Butter, do	12	18	15	23	12½	14	11	13	10	14	12	14
Cheese, do	6	6½	7	8½	6	7	5	8		6		
Flour, per bbl.......	4.00	5.50	4.12	5.75	4.75	5.00	3.00	3.50	3.10	3.40	4.12½	4.75
Wheat, per bush....	90	1.15	90	1.05	96	1.00	66	69	57	58	89	1.00
Corn, shelled, per bu.	67	70	70	72	54	56	46	48		40		70½
Rye, do		79½	85	87	56	62			48	58		60
Oats, do	40	44½		47	32	40	27	31	20	23	33	38
Barley, do	58	62½			67	70						
Clover seed, do	7½a8 pr. lb.		8 a 11 per lb.			5.50			4.00	5.00	4.87½	5.00
Timothy seed, do	$17 to 19 per tce.		2.50	2.75	2.25	3.00		2.25	1.50	2.50	2.00	2.50
Flax seed, do	1.20	1.35	1.33	1.40	1.25	1.50		1.00	90	1.00		1.25
Hay, per ton........	16.00	20.00	17.00	18.00	7.00	10.00			5.00	10.00		
Wool, per lb........	33	50		50	30	40	23	36	26	40	35	55
Wood, hard, per cord			5.00	6.50	4.00	4.50	5.00					

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Real Estate for Sale.

THE health of the subscriber having failed him, he is induced to offer for sale his Mill property, consisting of a custom Mill, recently put in a good state of repair; a Saw Mill, also recently repaired; two Dwelling Houses; a good Orchard, and about 22 acres of land, including flowage land. Said property is situated in the pleasant town of Yates, Orleans Co., N. Y., in the midst of a wealthy farming community and an excellent wheat growing country.

He has also a farm of 154 acres of first quality land adjoining said Mills, 120 acres improved, good buildings, orchards, and plenty of running water. He will sell said farm with the Mills, if desired. Inquire of the subscriber, on the premises.—[7-3t] J. C. PARSONS.

Multicaul Rye.

I HAVE grown, the present season, about two hundred bushels of this celebrated rye, for which I obtained the premium at the last State Fair. I can now, therefore, supply those who applied last year in vain, at the rate of $2.50 per bushel. This rye has yielded with me forty bushels per acre, and furnishes abundant food for stock, as it can be sown any time between July and October, and as soon as well started should be fed down until about the 10th of May.

DANIEL P. BIGELOW.

Barre Centre, Orleans, Co., N. Y., Sept., 1852.

LINNÆAN BOTANIC GARDENS & NURSERIES
FLUSHING, (LONG ISLAND,) N. Y.

WM. R. PRINCE & CO. will sell off by the first of May next, the entire collection of Trees and Shrubbery from 50 acres of their Nurseries, and the Green-house Plants, the ground being wanted for building lots. The trees are equal to any ever grown, and comprise the choicest varieties, and sales amounting to $250 and upwards will be made at 18 months credit for approved security.

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50,000 Evergreens of every species and size, and other Ornamental Trees of every size.

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Five best species of European Osiers.

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An immense assortment of Bulbous Flower Roots and Pæonies, and the finest collection of Strawberries.

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NOTE.—This is the proper period for transplanting Strawberries, Bulbous Roots, Pæonies, Rhubarb, &c.

Sept., 1852.—9-1t*82

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, JR., EDITORS.
P. BARRY, Conductor of Horticultural Department.

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DANIEL LEE,
December, 1851. *Rochester, N. Y.*

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STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.

THE GENESEE FARMER

VOL. XIII. ROCHESTER, N. Y., OCTOBER, 1852. No. X.

CONGRESS AND AGRICULTURE.

CONGRESS has recently adjourned, after a session of nine months; and as agriculture gives employment to two-thirds of the capital and labor of the country, it may not be amiss to inquire how much time and attention the national legislature bestowed on this most important interest. Did it give a month, a week, a day, an hour, or a minute, to the consideration of any measure designed to promote either tillage or husbandry? Being in Washington, and having a watchful eye over the farming interest, so far as it might be affected by Congressional legislation, we are able to speak understandingly on this subject. Agriculture had a few friends in both houses, but the enemies of the cause were too powerful for them to accomplish anything whatever in behalf of improvement. This failure, however, does not lessen our obligation to acknowledge in the most public manner the labors of such as tried to realize a more auspicious result. To make more friends in Congress, we must do full justice to those that serve the cause faithfully, whether they fail or succeed. Among these, we place Mr. EBEN NEWTON, of Ohio, in the front rank. Watchful, industrious, and persevering, while neglecting no other duty, he presented the paramount claims of agriculture to the attention of Congress in a manner so clear and convincing, that had the bill creating a Bureau been allowed to reach a direct vote, with the ayes and nays, we doubt not it would have passed the House of Representatives; but the committee on agriculture were not allowed by the majority even to report a bill in nine months, the chairman (Mr. FLOYD, of New York,) being opposed to all legislation for the benefit of the farming interest, as recommended by the President in his message. Gov. DOTY, of Wisconsin, was a member of that important committee, and did a yeoman's service in the cause of agriculture. To the intelligent farmers of the northwest we say, be careful to sustain this able and reliable friend of your cause. Stand by your friends, and let your enemies take care of themselves.

Of the New York delegation, we have found Mr. L. BURROWS, of Orleans county, always reliable during the three years that we have known him at the federal metropolis. Without making speeches, Mr. B. is one of the most upright, influential, and useful members in the popular branch of Congress. Mr. HORSFORD, of Livingston, who is a practical farmer, illustrated the wisdom of sending this class of men to legislate for a nation of farmers. As the latter grow in knowledge, they will be represented by fewer lawyers and more cultivators of the soil, at Washington. Mr. WALLBRIDGE, of Tompkins, and Mr. IVES, of Jefferson county, are also farmers, and most useful and faithful representatives. Sometimes we meet a narrow-minded, do-nothing farmer in Congress, but he is a *rara avis*. Among those who were ready to work for the benefit of agriculture, the name of A. P. HASCALL, of Genesee county, should not be omitted. Straight forward working men, and no other, should be sent to Congress. By all means, let the drones remain at home, for their unworthy examples do a deal of mischief in any legislative body. Idleness, drunkenness, fighting, and blackguardism work badly with grave and peaceful legislation. In no other place is a thorough reform so much needed as at the capital of the United States. If it were possible for the people to see all that their public servants do in Washington, many a popular man would be ruined. But so long as the people are kept in ignorance of vices the most demoralizing, and of public duties uniformly neglected, neither agriculture nor any other great industrial interest will be properly attended to. The patronage of Congress and the Departments is too important to the journals of the metropolis for them to expose the shortcomings of the men that hold the strings of the public purse. Restraints more potent and salutary are greatly needed; but it is not so easy to determine from what sources they are to come. More care ought to be excercised in selecting delegates. The disposition of fifty millions a year presents numerous and powerful temptations to favoritism, fraud, and downright robbery of the treasury. One reason why nothing is done for agriculture, is that Congress has too much money to dispose of at each session. Rural sciences, and the advancement of tillage and husbandry, stand no chance in a general scramble for indefinite millions of plunder.

◆

"THEORIES EXAMINED AND EXPLAINED."

Such is the comprehensive heading of a series of articles which Mr. **Levi Bartlett**, of Warren, N. H., is writing for the *Boston Journal of Agriculture*. Hitherto three letters have appeared, all more or less directed against those who doubt the correctness of the so-called "mineral manure theory." Number two is an examination and explanation of Mr. **Lawes**' experiments and results on wheat culture, which have been published in full detail in the *Journal of the Royal Agricultural Society of England*. It is exceedingly unfortunate for the cause of truth and the advancement of agricultural improvement, that neither **Liebig** nor Mr. B. appear to have read the pamphlets written by Mr. **Lawes** himself, but have taken up their able pens to refute what they obtained only at second hand. Mr. B. confines himself to a few facts respecting Mr. **Lawes**' experiments, which we mentioned in the June number of the present volume of the *Genesee Farmer*, when speaking of the benefits derived from plowing in green crops as manure; and upon these few facts, quoted for a special purpose, Mr. B. forms his opinion respecting the whole of Mr. **Lawes**' experiments, and says:

> "I presume there can be no doubt of the correctness of the experiments made by Mr. Lawes, neither of the results or conclusions to which he arrived, as regarded the particular soil upon which he experimented. To my mind, the result of his seven years' labors does not establish any general principle in agriculture, that can be safely followed, or practically be relied upon; neither does it in any way determine the value or use of applying any of the salts of ammonia to the wheat crop, on other kinds of soil, nor does it depreciate the well known utility of manuring other soils with potash, soda, sulphate of magnesia, calcined bones, &c., or settle any other relative question,* only so far as regards the *particular soil* on which he experimented, and others of *precisely* the same *mineral* and *organic* composition."

This is rather a severe judgment respecting the value of experiments which have cost at least *one hundred thousand dollars*, and been made by scientific gentlemen of acknowledged capability and accuracy. Dr. **Gilbert** has given his entire time to the experiments for nine years; and we presume that even Mr. B. will admit that he is a gentleman every way competent to make experiments that shall lead to the elucidation of great and fixed agricultural principles, inasmuch as he has spent considerable time in the best continental and British laboratories, and received the degree of Doctor of Philosophy from the great **Liebig** himself. Our own opinion is, that he is the most careful, reliable, and best agricultural chemist in Great Britain—one who prefers to investigate the laws of nature in the field and laboratory, rather than to obtain an ephemeral popularity by writing series of gassy articles on subjects about which he has nothing new to say. If such a series of experiments as these gentlemen have made do not amount to anything, they and all other experimentalists had better quit the business, and go to work with the pen and examine and explain, *deductively*, the various theories now agitating the agricultural community. They would in this way build up a system of agriculture that would rest on an impregnable fortress—so long as experiments were held as showing nothing.

Mr. B. said he made the above statement advisedly, and promised in a future number to bring forward facts and experiments as much entitled to credence as Mr. Lawes'. We should have replied to this article sooner, but waited to see the facts promised; but in the September number of the *Journal of Agriculture*, there is another article devoted to Mr. Lawes, ***but not a single fact or experiment brought forward that supports the mineral theory***, or is adverse to the theory Mr. B. is endeavoring to explain away.

Mr. B. cites Johnston and Norton, to show that nitric acid and ammonia are formed in the atmosphere; and that when lime, potash, soda, &c., are applied to the soil, nitric acid is obtained, which is equally valuable as ammonia for supplying nitrogen to plants; (?) and asks:

> "Is it possible there was no nitrate of potash or soda formed from nitric acid derived from the atmosphere during the seven years course of culture, when potash and soda were so liberally supplied to the soil? Again, it is said, and pretty generally believed, that sulphate of lime (gypsum) will fix a portion of the ammonia that falls in the rains. Would not the sulphate of magnesia, (which Mr. Laws so liberally applied to some plots of his field,) fix the ammonia of rain water, as readily as gypsum? An imperial gallon of water, at the ordinary temperature, will dissolve only about four ounces of gypsum; while the same amount of water will dissolve four pounds of sulphate of magnesia. But what is still more singular, in several instances he applied 150 lbs. of sulphuric acid, one of the most efficient agents for decomposing carbonate of ammonia, and changing it to a sulphate, one of the two compounds of ammonia, that had such a wonderful effect in doubling his crop of wheat—was there no sulphate of ammonia added to the soil during the seven years trial—from the ammonia of rain and snow water? If there was, why should not this naturally-formed sulphate have had some beneficial effect, as well as that artificially applied? To my view, some of these things are inexplicable."

The 150 lbs. sulphuric acid was not applied in any instance in the free state, but combined with 200 lbs. calcined bone dust—thus forming the soluable article superphosphate of lime, at present so much recommended by certain parties as a manure for the wheat crop.

"Was there no sulphate of ammonia added to the soil, during the seven years' trial, from the ammonia of snow and rain water?" We answer, there was—sufficient to grow from 15 to 23 bushels, varying as less or more rain fell during the growing season, and thus supplied less or more ammonia to the plants. Mr. B. starts with the assumption that the atmosphere is capable of supplying an unlimited quantity of ammonia to the soil, providing the proper means are used to attract and fix it; and therefore the fact that sulphate of lime and sulphate of magnesia, "said and generally believed to be capable of fixing the ammonia of rain water," did not increase the crop, while ammonia artificially supplied did greatly increase it, is "inexplicable." Precisely it is, if the assumption is correct; but where is the proof of it. We think—not because "it is said and generally believed," but because experiments show it—that a *good wheat soil*, if properly drained and tilled, so that the water can percolate through it, will retain all the ammonia brought to it by rain and snow water; and therefore the addition of the supposed fixers, gypsum and epsom-salts, would not increase the supply of sulphate of ammonia available for the plants. We know that the amount of ammonia brought to an acre of land each year, by rain and snow, is much more than a crop of wheat ever contains; but where is the evidence that in the growth of the plant there is not a destruction of ammonia. Mr. Lawes contends that there is such a destruction, and demonstrated it by his experiments—that, in fact, for every pound of ammonia organized in the wheat plant, there is at least five pounds of ammonia used by the plant in the performance of its functions. Mr. **Lawes** did not clearly perceive how and for what purpose this destruction took place, but was nevertheless convinced of the fact. Recently the experiments of Prof. **Way** render it exceedingly probable that ammonia is used as the solvent and vehicle for carrying silicic acid to the plant, and *evaporating* when the silica is deposited, just as water is known to do in depositing the elements of plants. Chemists have always had a difficulty in accounting for the manner in which silica was conveyed to the plant, the theory being that it was as a soluble salt of potash or soda, and the patent of Prof. **Liebig** was for manufacturing this soluble silicate of potash, &c.; but from the fact that this patented manure has failed to increase the wheat crop, not only in England, but in Germany, under the immediate superintendence of **Liebig** himself, it is more than probable that silica is not taken up as a silicate of potash. Admit the opinion of Prof. **Way**, and we can account for the benefit of summer-fallow on heavy soils—for the manner in which silica is deposited—and for the fact that in the growth of wheat there is an immense destruction of ammonia, as there would also be in the growth of all the cereals and other plants containing a large per centage of silica.

Will Mr. B. examine and explain this theory, not from what we say about it, but from the article itself, published in the last *Journal of the Royal Agricultural Society of England?*

In number three, of the series of letters, we have repeated assertions, but none of the promised experiments or facts. Mr. B. says: "At the first glance, some might be led to infer from the result of Mr. **Laws'** statements, (and there can be no doubt of their correctness,) that the only thing needful for growing good crops of wheat, was *ammonia*, in one form or another." Mr. **Lawes** most certainly never made any such "statement"—but, as we have said before, Mr. B. does not know what Mr. **Lawes** has said, as he evidently has not read his articles, is ignorant of the bearing of the subject in England, and does not even know how to spell his name correctly. As our article on plowing in green crops appears to be the source of Mr. B.'s information, why does he not attempt to refute the position there maintained by us, and not attack Mr. **Lawes**. We never said, any more than Mr. L., that the only thing needful to grow good crops of wheat, was ammonia. We say that every mineral which enters into the construction of the plant, must be in the soil in sufficient quantity, and in an assimilable form; and that if *any one is absent, the plant will not grow at all;* if any one is deficient, there will be a deficient crop: and this, though there is a liberal supply of ammonia. But that, though there is an abundance of every inorganic constituent present in the soil, and in an available condition, yet there will not be sufficient ammonia supplied from the atmosphere to produce over an average of 17 bushels of wheat per acre; and that if we wish for an increase over this amount, ammonia must be supplied artificially.

We do not deny that there are some soils so rich in organic matter that an addition of ammonia would be worse than useless, and that on such soils mineral manures will be of great benefit; but as a general thing, on most of our soils cultivated with wheat, ammonia (on account of the destruction we have mentioned as taking place) is much sooner exhausted than even phosphoric acid, which we hold to be the first *mineral element* exhausted. We believe there is no better wheat-growing district in the United States than Western New York; yet even here we do not average more than the annual yield of wheat on the continuously unmanured acre in Mr. **Lawes'** experiments. Why? Is it because the minerals are deficient in the soil? If so, why is it that we can, without supplying any, still continue to grow wheat? Why is it, too, that we can obtain such splendid crops of clover, which contain precisely the same elements, and in larger quantity than the wheat crop, excepting the single element silica, or sand. But of this no one for a moment supposes our soils are deficient. How is it, too, that plowing under a crop of clover benefits the wheat crop? No addition of minerals are supplied to the soil, and yet the wheat crop is greatly increased. The answer is simple and obvious—our wheat fields need a more liberal supply of ammonia, which the clover supplies.

If our wheat fields needed nothing else than the ash constituents of wheat, to keep them in a high state of fertility, and if there was no destruction of ammonia in the growth of cereals, wheat-raising on such scientific principles would be attended with much larger profits than most farmers obtain at present; and all who believe such a doctrine, should, to be consistent, rush into the business, and make their fortune by high farming. A crop of wheat of 40 bushels per acre, would take from the soil in the grain about 40 lbs. of ash. The constituents of this ash can be returned to the soil in wood ashes, salt, and animal charcoal, for less than *one dollar;* so that all we have to do to keep land yielding 40 bushels of wheat per acre, is to apply about a dollar's worth of mineral ingredients. If such a doctrine is true, *high farming* would be the most profitable business in the world. But this is not the case; and it is the necessity for, and high price of *ammonia*, that renders the production of large crops of wheat, at the present relative prices of ammonia and wheat, of doubtful economy. Are we wrong, then, in urging on our readers the importance of accumulating ammonia in every possible way on their farms, as being the only known way of increasing the average yield of wheat, corn, &c., &c. . We place ammonia most prominent, because of all fertilizers it is most necessary; and we know of no way of accumulating ammonia on the farm, without at the same time increasing the indispensable inorganic constituents of plants.

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BUTTER AND CHEESE MAKING.

In the May number, page 143, we gave an article on this subject, which has called forth a letter from a correspondent of the *Ohio Farmer*, in which the writer says he differs in a few things from the opinions stated in our article.

First, it is his opinion that the cause of rennet curdling milk, is the gastric juice it contains, and not, as we stated, to the addition of a *soluble highly nitrogenous ferment*, such as is formed by the *eremacausis*, or transformation of the stomach of animals during the process of making rennet.

We will admit that gastric juice is generally supposed to be the efficient agent of rennet, and that milk is immediately curdled in the stomach of animals—as every one who has been blessed with a babe must have observed—and that the stomach of animals makes better rennet than any other substance. Milk will curdle without the addition of any substance, merely by the transformation of its "sugar of milk" into lactic acid, which invariably takes place at the proper fermenting temperature, and in the presence of a nitrogenous substance, such as casein or curd. The addition of any animal membrane or meat, will accelerate this transformation or curdling of milk. Many vegetable substances will also do the same. The Jews, who were forbidden by the Mosaic law to mix meat with milk, make their cheeses with Ladies' Bed-straw, (*Galium verum.*) In some parts of Holland, muriatic acid is used as rennet. If gastric juice is acid at all, which is somewhat doubtful, it most certainly is a very weak acid; and therefore, if it is the acid of gastric juice that is the efficient agent, large quantities would be required to neutralize the soda of milk, and precipitate the curd. But in rennet, as commonly used, there could not possibly be but a very small amount of gastric juice left. If, too, rennet acted from the acid of gastric juice, its effect would be instantaneous, or at least the precipitation of the curd would be much quicker than it is found to be in practice. Our critic offers no reasons for his opinion, we have therefore none to refute; neither does he offer any evidence against the correctness of the one we advocate.

His other objection is, that we recommend the milk to be raised to too high a temperature (95 deg. Fahr.) at the time of adding the rennet. He thinks 85 to 90 deg. the proper heat.

We know that the colder a cheese is "set," the sweeter, softer, and tenderer it will be, and have a rich buttery appearance; but at the same time there is danger of having it too cold—the curd is not all obtained from the milk, and it is very difficult to get all the whey out of the cheese, whereby it is much injured and often spoiled. We dislike a tough, dry, hard, white cheese, as much as any one, and therefore would not advise our readers to put the cheese together too warm; at the same time, we do not like a cheese that cuts like butter, and lacks that sharp, dry, cheese taste, so much sought after by good judges—such as a cheese would be if put together too cool. It is, however, possible that we have given the temperature for setting milk rather too high, and that 90 deg. would be the best average temperature. At the recent New York State Fair, where there was a splendid exhibition of cheese, we conversed with several exhibitors in respect to the process of cheese making. The temperature at which they set the milk, ranged from 85 to 96 deg. One large maker, from Herkimer county, said he did not use a thermometer, and always judged by his hand, endeavoring to get it about blood heat, (98 deg. Fahr.)—setting it a little warmer in spring and fall, than during the hot months. The celebrated Cheshire cheese is set from 90 to 100 deg., the desired temperature being 95 deg. As a general thing, the poorer the milk is in butter, the colder should it be set together; otherwise the cheese will be hard and tough.

We are glad to have our articles commented on by our readers, even in contemporary papers, hoping that truth will be drawn out, and the cause of agriculture advanced by discussion. Cheese is at present, and will continue to be, one of our great agricultural products. We wrote the article in May, for the purpose of inducing farmers to make more cheese, and hoping to throw a little additional light on the chemical and practical process of cheese making, that would not be useless even to those who have been years in the business.

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DROUTH AND DEEP TILLAGE.

The depth to which the roots of wheat, corn, clover, &c., penetrate the earth, under favorable circumstances, is much greater than is generally supposed. We have seen roots of wheat, under ordinary cultivation, that were upwards of nine feet long; and it is supposed that clover roots descend lower than wheat, though on what evidence we know not. The value of deep plowing and thorough pulverization of the soil, is now beginning to be more generally *seen*, and accordingly believed in.

There are some soils on which deep plowing would, for the first few years after the operation, prove injurious; yet in the end, under the meliorating effect of the atmosphere, the advantage of such plowing and working would be most decided. Subsoil plowing, or merely breaking and loosening the subsoil without bringing it to the surface or mixing it with surface soil, can not prove injurious on any soil, though it may the first and second year cause it to throw up a most unusual quantity of weeds, instances of which we have ourselves experienced.

We do not think it is necessary or advisable to plow deep for every crop—one good deep plowing once in four or five years being all that is required. Especially is this true where manure is applied pretty freely, and crops are grown which require most manure during the early stages of their growth.

It is rather a difficult matter to get some farmers to believe that in a very dry summer, land that is well underdrained and subsoiled so that all water shall drain off quickly, is really wetter, or is capable of supplying more water to the growing plants, than a similar soil undrained or shallow plowed. It is nevertheless a fact; and more and more are convinced of it each year, as they see the good effects produced. And as we believe that all which is necessary to cause a farmer to change his mode of culture, is to convince him he is in error, and to show him a better way for him to adopt, we think there can be no doubt that the next twenty years will witness a great change in our system of agriculture, and under-draining and deep plowing will be the foundation of the much needed improvement.

We have been led to these remarks, by reading an article in the *Rural New Yorker* of September 9, from the pen of LINUS CONE, Esq., of Troy, Oakland county, Mich., in which, after saying that the crops have been most seriously injured by drouth this season, he gives the following most important and interesting statement:

> "As an instance to show what deep cultivation will do in time of severe drouth, I will mention a field of about six and a half acres, mostly high, dry, undulating, clayey land, which has been in grain most of the time since it was cleared—over twenty years. Five years since, it was manured with about thirty loads of coarse barn-yard manure to the acre, and planted to corn for two seasons, then barley and oats one season, wheat next, and seeded with eight or ten bushels of clover chaff and six quarts of timothy to the acre. For the barley and wheat crops it was subsoiled and made fine and mellow to the depth of twenty inches. This season it was in meadow, and a heavier growth of grass I never saw; thirty-three loads of hay were taken from it, and since it was cut the pasture has been fresh and good. Here was probably over three tons of hay per acre, while on other land in this vicinity, of similar soil, but which had been subjected to shallow tillage, the grass was light—in many cases hardly worth cutting.
>
> "I might mention other instances to show the beneficial effect that deep cultivation has upon growing crops, but it is not necessary—it would not probably do any good even if such a statement should be made to every farmer in our land. It is so much easier to grumble about the weather than it is to put in the plow, that nearly all prefer the latter course."

The fall is the most convenient time for subsoil plowing and underdraining.

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THE IMPROVEMENT OF OUR COMMON SHEEP.

IN the improvement of sheep, as well as of other animals, the *male* is considered of more importance that the female, and more care is therefore necessary in selecting one; yet, for the production of perfect animals, it is absolutely essential that both male and female be well-bred; and if not individually perfect in every point, the conformation of the *two* should be such as when combined would form a perfect creature. So that, in endeavoring to improve our common flocks of sheep, we should not only get good, first rate bucks, but should select out from the flock the ewes of the best age and make, to put with him; and in choosing them, should have an eye to those particular points we wish to have well developed in the lambs. In this way much may be done to improve our ordinary breeds of sheep, without much outlay in purchasing improved stock. A knowledge of the principles of breeding, and care in the selection and management of the ewes from which we intend to breed, and the choice of a buck adapted to counteract any deficiencies in the ewes, will, if judiciously persevered in for a few years, greatly improve any flock of sheep.

Farmers often procure a buck which, however useful he might be for other flocks, is altogether unsuitable for the flock he is intended to serve. Again, in a large flock of ordinary sheep there are often two or more kinds of ewes with characteristics entirely different from each other: hence a buck that might be first rate for the one, and calculated to improve the breed, would be altogether ill adapted for the other, and would propagate imperfections rather than neutralize them; yet how common is it to let the whole flock run together, and have the indiscriminate use of the same bucks. Instead of this careless, heedless, and profitless way of breeding, the flock should at this time be judiciously assorted into lots of forty or fifty, having a buck with each lot possessing strongly the particular points in which the ewes are somewhat deficient, and in accordance with the object for which the lambs are raised. Where a small flock is kept, and only one buck is needed, a farmer can often select out some ewes of a particular conformation, that would be better served by a neighbor's buck than his own. The neighbor, too, may be in the same circumstances; and thus a change of ewes to be served by each other's buck would be mutually advantageous to the owners and beneficial to the flock.

The best time at which to place the bucks with the flock, depends a great deal on the breed of sheep and the object of the breeder. If his flock is rather coarse wooled, and he wishes early lambs for the butcher, the middle of September is perhaps not too soon. This, as ewes go twenty-two to twenty-three weeks, would bring the lambs about the first of March, which in the vicinity of large cities, where early lamb commands a good price, is the best time—yielding most profit, although a little extra care and feed are necessary. The buck in this case should be a Leicester or South Down, as their cross with common sheep gives a larger lamb, with increased tendency to fatten and early maturity. Such a cross with our common half-blooded Merino flocks produces good mutton sheep, and it is often profitable to adopt it for that purpose; but it would be folly to attempt to *breed* from such a mongrel race. We are not sure, however, but a good South Down ram would improve the size and constitution of some of our common flocks, without materially injuring the weight and quality of the wool. If, however, the object of the flock-master be merely the production of wool of fine quality, he should procure Spanish or French Merino bucks, selecting from his flock the best ewes of from three to eight years old to place with them. It is not desirable to have the lambs come till there is a prospect of grass for the mother; so the bucks should be kept from the flock till the latter part of October. And as grass is often scarce and innutritious then, it will be advisable to give a little clover hay, or perhaps oats or peas, to stimulate the ewes at that time. The buck, too, should be grained, or have a little oilcake at night, separately from the ewes. Nothing pays better than careful attention to the flock during winter; and towards spring the quality of their food should be increased, and a few ruta baga or mangel wurzel may be given with advantage.—Especially are they beneficial when the ewes are heavy in lamb, or after lambing, if grass is not ready. It is not, however, desirable to have the breeding ewes too fat; but we are sorry to say this is a caution too little needed—more flocks being injured by scant and non-nutritious food, than by over feeding.

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To Reduce Solid Feet to Bushels.—The publication, in your August number, without comment, of an article giving a rule "to reduce solid feet to bushels," though perhaps correct in Indiana, where it appears to have been written, and though sufficiently accurate for ordinary purposes, is very likely to give wrong impressions of the contents of the bushel in this State. By the statute of New York, the bushel bears the same proportion to the cubic foot, that 80 does to 62½. Therefore, as 62½ : 1728 inches :: 80 : $2211\frac{84}{100}$ inches, the content of the bushel—making a difference of $61\frac{24}{100}$ inches between the bushel of your correspondent and that established by our statute. A rule to reduce solid feet to bushels, applicable to this standard, is to multiply the number of solid feet by 25, and divide the product by 32; the quotient will be the number of bushels. A solid foot is $\frac{25}{32}$ of a bushel. The crib or box containing 64 feet, mentioned in the "example" of your correspondent, contains according to the above standard, exactly 50 bushels. A. F. H.—*Kingsbury, N. Y.*

We are happy to publish this correction of our correspondent, which is the true rule for calculating the size of the imperial bushel, now adopted as the standard. The rule previously given was correct in regard to the "Winchester bushel," now no longer in use.

WINE-MAKING.

BY C. BLAKELY, OF ROXBURY, CONN.

IN the last January number of the *Farmer* may be found some important information on the subject of making wine, together with some remarks of my own on the culture of the vine, to which, as the subject as it has been presented in your paper is by no means exhausted, I would beg leave to append a few hints for the special benefit of those of your readers who may wish to try the experiment, as many of them might easily do, of making wine on a small scale.

The manufacture of wine is, to a very great extent, a thing of mere fancy or *taste*. Few branches of business are more completely under the control of the operator, or subject to greater modifications. There are so many ways in which wine may be adulterated, and the facilities for making good imitations of the pure article without employing a single drop of grape juice are so numerous, that it is difficult for most persons to distinguish the spurious from the pure. It may be made strong or weak, and may be colored, aromatized, or flavored, to suit the fancy. This constitutes an important reason why it should be produced in every section of the country, by persons of reliability, and to an extent commensurate with the legitimate uses to which it may be applied. And why should it not be? Why purchase an article for medicinal or sacramental uses, the appropriateness of which for the purposes for which it is intended we know nothing about? Why not make for ourselves the very article we want? I propose to notice first—

The time of gathering the grapes.—There is an appropriate time for this. If too green, they will be wanting in richness, and in that peculiar *ripe*, spicy flavor, which is essential to good wine. Again, when they become too ripe, so as to be shriveled, it is a sign that much of the juice, and the gaseous aroma along with it, have made their escape by evaporation, and that the fruit is tending to decay—a state which is unsuited for making lively, delicious wine. The best time for harvesting, is when they have arrived at maturity of color and size, and before there is any tendency to decay.

To cleanse the cask.—The condition of the cask, jug, or bottle, designed for containing wine, can not be too carefully attended to. It should be free from anything like sediment, or mold adhering to the interior, the condition of which may be readily known by suspending a lighted candle by a wire within the cask. When must or acid has become fixed in the cask, it is very difficult removing either of them. A little unslaked lime dropped within the cask, with boiling water applied, so as to cause rapid ebulition, is a good thing. Water that is freely impregnated with alkaline salt, or the lye of wood ashes, is an excellent thing; also, the fumes of sulphur are used.

Fermentation.—Previous to fermentation, wine is called *must*, or *stum*. That which has been once dead and has been re-animated by means of extraneous additions, is called *stummed* wine. In the January number of your paper there are *two* fermentations spoken of, as taken from the *Review*, previous to the usual time of bottling. This is not technically correct. The second fermentation there alluded to, is but the resumption or continuation of the first, which had been retarded or suspended by the intervening cold weather. The *season* of the year, irrespective of heat or cold, has no influence on fermentation. There are three kinds of fermentation: First, the *vinous*, producing alcohol or spirit, and giving to the liquor its peculiar stimulating and preserving qualities; second, the *acetous*, converting it into vinegar; and third, the *putrid*, destroying its vitality, and changing it into a nauseous, poisonous liquid.

When to bottle wine.—This depends on a variety of circumstances, one of which may be the legitimate offspring of another. It may be changed into vinegar in a few hours, by a process well understood by manufacturers of that article, or it may be kept for ages in its original, unfermented state, according to the treatment it may receive.

Artificial heat is sometimes employed to keep up fermentation during the winter, and fit the wine for an early market; but a temperate situation, and a gradual change from a new to the vinous state, is esteemed preferable for making good wine. For the time of bottling, see *Methods of making Wine*, hereunto appended. When the cork is driven in, which should be done with the flat side of a wooden bat, the bottle should be turned upon its side, that the liquor, and consequently the entire bottle, may resist the pressure, otherwise it will be liable to break. They should also remain on their sides, that the cork may be kept swollen, and all communication from without prevented. Atmospheric air should be excluded both from casks and bottles, and no cask but partially filled should be allowed to retain it for any considerable length of time. The influence of air, where allowed free access, will be to extract the vitality of the wine, its aroma and alcohol, and eventually to induce putrid fermentation. Besides, a scum will usually form over the surface in partially filled casks, which in time will be converted into a bitter mold, especially around the outer edge, and you have then only to shake or move the cask in order to impart a disagreeable flavor to its entire contents.

The alcoholic properties of wine.—On this head I wish to speak, inasmuch as many persons, though well informed on other subjects, entertain entirely erroneous opinions in regard to this. I have before me a copy of the *New York Evangelist*, an ably conducted religious journal, containing a highly commendatory notice of certain wines, *because* they are said to be "made without alcoholic additions." Similar notices are often contained in other papers; and the inference on the part of many minds is, that it is *free* from alcohol. This, much as it is to be desired, is an impossibility! That which we technically call wine, can be preserved at a temperature of 33 deg., for then no fermentation can take place; but not in the ordinary way; nor can it even be *made* without alcohol, which is entirely the result, not of *distillation*, but of *fermentation*. The distillation of any liquid can not create a particle of alcohol; it is merely the process of separating it from the mass. When we can contrive a way to make wine without the use of sugar, either of grape or cane, which enters largely into the composition of almost every vegetable, and without fermentation or evolving carbonic acid; then, and not till then, may we have wine without alcohol. I can not see that pure brandy, the product of wine by distillation, is seriously objectionable as a preserving ingredient; but as its purity can not generally be relied on, the use of sugar of cane, which is plenty and cheap, will generally afford satisfaction. As to the per centage of alcohol necessarily employed in the preservation of wine, there seems to be no settled rule. I give below the results of several analytical experiments upon different kinds of wine, as found in *Brande's Chemistry*, New York edition, 1821, at page 521. Seven kinds of port wine analyzed, gave results differing in strength from 19.00 to 25.83 per cent. of alcohol, which I suppose is equivalent in strength to about 38 to 51 per cent. of common brandy. Other experiments upon wines in which brandy could not have been used without destroying their identity, gave from 11.3 to 16.6 per cent. of alcohol, the highest figures indicating the strength of about 33 per cent. of common brandy. What per centage of alcohol any given quantity of sugar will yield as compared with a given quantity of brandy in the same kind of wine, I am not able to say. Will not some one inform us!

For some other valuable hints, I would refer your readers to the April number of the *Farmer*, page 117. I give below three methods of making wine, as practiced in making on a small scale.

First method.—Mix equal parts of mashed grape and water together, and let the whole remain a week without stirring; a less time will do if the weather should be unusually warm. At the end of that time, draw off the liquor and put to each gallon three pounds of sugar. Let it ferment in a temperate situation. When fermented, stop it up tight; and in about six months it will be fit to bottle.

Second method.—Put into a bottle about one-third the quantity of water that you intend to add of grapes, and heat it as long as the hand can well endure; then put in the grapes, which will become so softened by the warm water that they may be easily mashed by the hand, and when mashed the liquor in this diluted state may be easily separated from the skins and seeds by passing it through a cullender. To each gallon of this liquor add three pounds of sugar; stir it till it dissolves; let it work as before, and bottle when it is fit, which may be in six months or a year.

The above rules will answer very well for grapes that are pulpy, having a thick coat of flesh adhering to the inner surface of the rind.

Third method.—Wash the fruit in any way you can do it most easily, and if the quantity is small, strain or squeeze the juice through a cloth strainer. This will be rather difficult if the fruit is pulpy, as the pulp will prevent the juice from percolating through. By letting it stand a day or so, it will separate more easily. Add to the juice, when extracted, from two to three pounds of sugar per gallon, according to the quality of the grape, the length of time you wish to preserve it, and the temperature at which it is intended to be kept. Three pounds of sugar is about as much as a gallon of Catawba juice will readily dissolve. One bushel of grapes will make three gallons of juice, and two and a half pounds of sugar per gallon will add to its volume about one gallon to every ten. The best of wine is made by this method; and in all cases where a superior article is intended, loaf sugar should be used. I think Mr. LONGWORTH disapproves of sugar for Catawba juice, but after a two hour's search for his paper I am unable to lay hands on it. If designed for use within a year, it may need but little extraneous to preserve it. The time for bottling, is when it arrives at the most desirable state of which it is attainable. See January and April numbers of this paper.

I present these *crude* remarks as the *fruit* however of some attention on my part, being aware that you and your readers may not exactly *relish* my *gleanings* on account of their extent, and *expressing* my regret that I have not been able to *squeeze* them into a more compact form, and to *treat* both you and them with a *richer*, more *refined*, and more *thoroughly elaborated* article; but I hope that no one will get into such a *ferment*, as to cause a violent *racking* either of brains or bowels on account of it.

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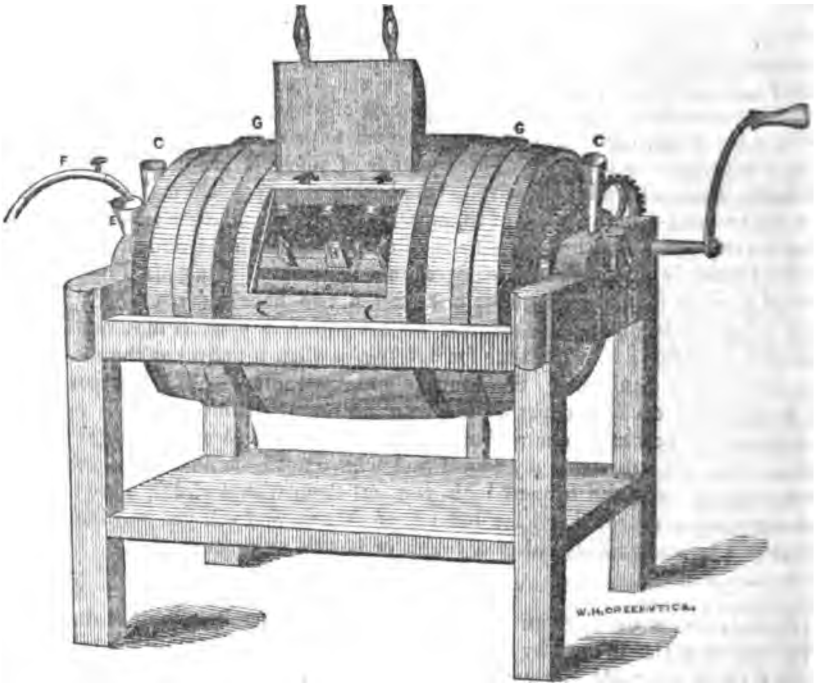
THE ADVANTAGE OF CUTTING CORN EARLY.—It is generally admitted that the grain of corn suffers little, if any, by cutting before fully ripe—that little nourishment is derived through the roots, during the maturing process, but that the grain obtains its food from the stalks and cobs; so that the grain is as heavy and the yield as great if cut up early and allowed to stand in the field till ripe, as if left growing till the stalks are dried up. In many districts, cornstalks form the principal winter feed for sheep and cattle; and these are often greatly reduced in value, by allowing the corn to remain uncut too late in the fall, when early frosts are frequent, and which greatly injure the nutritive qualities of the stalks as well as render them much more unpalatable to stock. After the corn is cut up, however, *frost does not injure the stalks*, as the circulation of sap, &c., is then stopped. It is nevertheless advisable to gather in the stalks as expeditiously as possible after husking, for fear of bad weather; and now that fodder is likely to be so scarce, it will be good economy to be at a little extra expense in hurrying the husking and the gathering in of the stalks. Stalks do better in stacks, if well built and covered, than they do in a close barn, where very little air can circulate through them. We would recommend scattering a peck of coarse salt to each load, when stacking the stalks; it imparts a taste to the fodder, which makes the stock eat it with much greater relish. From the effect salt has in retarding fermentation, stalks will bear to be harvested in a much greener or moister state, if salted as recommended, than when salt is not used. Carefully husband everything that will be useful as food for cattle; for in most places we shall greatly need it the coming winter.

THE EXCELSIOR CHURN.

We have received from the patentee, G. B. Clark, of Leonardsville, Madison county, N. Y., an engraving and description of a new churn, called the *Excelsior*. We give Mr. C.'s description, and for price, &c., the reader is referred to our advertising pages. We have never seen this churn in operation, and therefore can not speak personally of its merits, but we have seen statements from dairymen who have used them, and who speak very favorably of their operation.



"A is the rotating or revolving body, worked by crank and gearing, as shown, or it may be attached to any motive power by passing a band directly on to its raised hoops G G. Two or more large churns can thus be driven in one frame, by passing a short band from the first cylinder to the second, and from that to a third, &c., thus affording facilities for churning any quantity of milk and cream, together or separately, at one operation. By a new and simple device, the body is easily made water tight at its lid and bearings on the fixed or permanent axles. The cross bar, or dash, is a narrow wooden bar, placed longitudinally above the center of the barrel or body, with projections (B) on its upper edge, extending upward to the periphery, at any desired angle. Pins inserted in two side staves of the cylinder, pass between the projections on the cross bar, which is removably attached, or supported by iron braces, to the axles on which the body rotates or revolves. The axles are hollow, with ventilating funnels C C, set in blocks, and extending downward into their cavities. By closing the outward end of the axles, a perfect ventilation of the cylinder is effected, even when filled above the place of its axis. The cavities of the axles permit the crooked water tubes E E to be passed through them, to be inserted in the corked ends of the small metallic cylinder in the center of the churn. Through these tubes, which close by their flanges the outward end of the axles, and being of less diameter than the cavities, so as not to obstruct the ventilation, a stream of cold water can be kept running, the water passing down the outward injecting funnel through the tube, filling the tempering cylinder, (the small tube on the cylinder should be corked after the air has escaped,) and passing out at the waste pipe. This need only be used when tempering is necessary; and where running water can not be applied, a few pails from the well will reduce the temperature sufficiently. A thermometer may be used to ascertain the temperature of the water at the waste pipe, which will indicate correctly that of the milk or cream. The cross bar, tempering cylinder, and tubes, can all be removed from the barrel of the churn, thus leaving nothing but the empty cylinder for cleansing."

Condensed Correspondence.

Weight of Leicester Lambs.—I saw an article in the August number of the *Farmer*, relative to good sized lambs, which induced me to present you with the following. I also have some weighty lambs, without extra keep. One (from a yearling ewe) four months and one week old, weighs 85 lbs. Also, one which on the morning after birth weighed 14 lbs.; when four weeks old, 75 lbs.; and now, (August 26,) four months old, weighs 116 lbs. Can you beat this? They are of the Leicester breed. James M. Quale.—*Middlebury, Wyoming Co., N. Y.*

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To Kill Crows.—In the winter, or towards spring, the crows are generally very plentiful. Take the entrails of hogs or sheep, or a dead carcass of any kind, and place it at a proper distance behind the barn, or other out-building. Then take a two inch augur and bore a hole through some convenient spot, the proper height, and remain inside after they frequent it. Then take a good fowling-piece, well loaded, and when the black gents assemble to dine, point the muzzle of your gun through the port-hole, take a dead level at the thickest part of the assembly, and let go, and the carnage will be desperate. This is no theory; it is practical experience. I think nothing of killing twenty at four shots with a small gun. I have often done it, and had crows in the spring by the bushel. If you want them for scare-crows, take out the insides and thrown in a handful of salt to preserve them, and you can have crows to hang over the fields in the spring in any quantity; and depend upon it, they are perfectly horrified at the sight, and have no idea of entering premises where their black brethren are so uncivilly dealt with. H. H.—*Binbrook, C. W.*

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Wool Growing in Michigan, &c.—An article in the last *Farmer*, taken from the census of 1850, does not show the present state of things; still it is interesting to wool-growers. Sheep and wool have increased rapidly the past two years, since the census of 1850 was taken. We have now in Michigan over 1,000,000 of sheep, and they cut more wool per head now than the census indicates. My opinion is, that Michigan wool this season averaged 35 cents. Our wool is clean, light, and profitable for manufacturers; and they are anxious to secure the wool as soon as it is clipped. We don't oil our sheep, to make the wool grow, and add one quarter to the weight of the fleece. I never purchased any eastern sheep; my flock were principally bred on my farm, and all cut good fleeces. Some of my yearling ewes cut over six pounds river-washed wool. I sold my last spring's clip for 40 cents per pound, before removing it off the premises.

According to the *United States Economist*, published weekly by Kittle & More, Broadway, N. Y., at $3 per annum, there are 52,422,777 pounds of wool raised in the United States. The manufacturers work up 70,862,829 pounds. The supply and growth in 1850 was within a fraction of the quantity used. In the following year, 1851, the importations were increased to 32,537,071 pounds—nearly double that of any previous year—and the manufacturers paid $1,200,000 duty on the wool imported. The duty is 30 per cent. A Subscriber.—*Ann Arbor, Mich.*

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Farming in Indiana.—Being a Western New York man, and somewhat acquainted with the mode of farming and the productions of the soil there, and now spending a few weeks in this State, I will, with your permission, give your numerous readers something of an idea of what can be done in Indiana.

A day or two since, I called on Mr. Hiram Bacon, who, if I mistake not, is one of your subscribers, and after consummating our business, the conversation turned to agriculture, when I drew from him the following facts: Mr. B. is a native of Massachusetts, came to this State in 1822, and located in Washington township, Marion county, upon the same farm upon which he now resides. His resident farm contains 350 acres, two hundred under cultivation, upon which he has six work horses, twenty-five milch cows, one hundred hogs, twenty-five head of young cattle, and sixty sheep; and during the past year he produced 1,650 bushels of wheat from 70 acres, 4,000 bushels of corn from 70 acres, 600 bushels of barley from 30 acres, and 300 bushels of oats from 7 acres. The value of wheat produced was $825; cash received for pork, $818; value of corn produced, $800; barley, $375; oats, $45; butter and cheese, $500; calves, $50; receipts of orchard, $100;—making the total production of the 200 acres under cultivation, $3,013. Mr. B. is a scientific farmer, and avails himself of every facility for conducting his farm economically. He has located under the shed of his barn one of Emery's Two-Horse Railroad Powers, which runs a cross-cut saw, for preparing fire-wood at a saving of three-fourths the manual labor; pumps the water for his stock, which saves all the labor, save that of leading the horse on the power; runs his corn-sheller, by one horse, at the rate of 500 bushels per day; and he anticipates attaching a cornstalk-cutter and a corncob-crusher and grinder. Underneath his granary may be seen his farming implements, consisting of an eight-horse traveling threshing machine, which he takes into the field, passing from shock to shock, threshing and cleaning the grain as the machine moves on, at the rate of 300 bushels per day, with the labor of four hands, leaving the straw scattered upon the ground; also, drills, cultivators, &c., too numerous to mention. He has Densmore's Self-Raking Grain Reaper, with which he cut all of his own wheat and that of several of his neighbors, and performed (I use his language) to the entire satisfaction and admiration of all who witnessed it. He also added that it would have been almost impossible for him to have got through his harvest without it, and that he saved by its use at least one bushel of wheat per acre. J. O. Williska.—*Indianapolis, Ind.*

P. S.—Just as this was ready for the mail, Mr. Bacon happened in town, and the manuscript was submitted for his criticism, and it was discovered that there was a slight discrepancy in a few of the statements, viz: The pork was fattened, in part, from the corn, and the cows were fed a short time in the spring from the same production. But to offset this, I would say that there is no account made of the increase in the growth of young cattle, which was at least $100; the increase in sheep, which was something; the potato crop, which was $50; and many other smaller productions, of which no account is made. J. O. W.

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Rotation of Crops.—May it not be possible that, after all, the theory of rotation of crops is founded in error? Do we not see in nature a system entirely the reverse of rotation? Do we not observe that in nature the elements of which one particular species of plants are composed are carried back by a simple process to the earth, to form a new crop of the same species? To illustrate, do we not observe that trees, whether oak, maple, pine, or any other of the almost endless variety of trees, drop each one its own leaves at its own foot? And if we analyze the vegetable mold found, for instance, at the foot of a beech tree, may we not reasonably expect to find there the best beech tree manure? Admitting for a moment the theory of rotation to be true, ought we not to find in nature a process by which the leaves of the maple, hemlock, or some other tree, may be conveyed to the roots of the beech? Do we see such a process? Again: If certain elements, A, B, C, &c., enter into the composition of a stalk of wheat, and certain other elements, D, E, F, into the composition of a stalk of oats; and if the growth of wheat exhausts the earth of a part of the wheat-growing elements, may we not infer that the soil will be restored to its primitive condition by the restoration of the elements A, B, C; or if a crop of oats, by its corresponding elements, D, E, F? In plain English, ought we not to manure our wheat lands with wheat straw, bran, &c., and our oat fields with oat straw? Is not this nature's process? Is not the whole system of rotation of crops a suicidal policy—first exhausting the land for raising wheat, then oats, then barley, and so on *ad infinitum*—never giving back to a crop its proper nutriment, and thus in fact impoverishing the whole country! Is not the subject of sufficient importance to attract the notice of agriculturists, and institute experiments extending through a series of years, that the matter may be well understood; and if correct, adopted; if founded in error, rejected? C. B. Rider.—*Pike, N. Y.*

It certainly is quite possible that the *theory* of rotation of crops is founded in error. It is hardly possible, however, that the *practice* of a rotation—as adopted by good practical agriculturists, and founded, not on theory at all, but on the results of close observation and long experience—is fundamentally wrong. Agriculture is not literally a natural process. Any means used to increase the natural yield of the earth, is more or less artificial. The art of agriculture may be wrong, but we necessarily must use *art* to obtain any increase over the natural yield of the soil. Will our friend point out a better system of culture—one that shall produce larger crops, and at the same time keep the soil in its original fertility.

The elements A, B, C, as well as D, E, F, enter into the composition of all our cultivated farm products. One crop does not require A, B, and C, and another crop D, E, F; but both are composed of precisely the same elements, the only difference being in the relative proportions in which they enter the plant. There are some ten inorganic elements of plants, and four organic ones. The inorganic portion is derived wholly from the soil, the organic originally wholly from the atmosphere. The difference in the relative proportion of the inorganic elements required by different crops, is not sufficient to account for the benefit which experience proves is derived from a judicious rotation of crops; but when we look at the organic requirements of different crops, we see at once the value of rotation. Thus, to grow wheat, we require a very large amount of the organic elements nitrogen and hydrogen, which the atmosphere is capable of supplying for a small crop only. On the other hand, clover, turneps, peas, &c., are most amply provided with nitrogen and hydrogen, by the natural supply of the atmosphere. Their consumption on the farm by cattle, or by plowing them in without first passing them through the bodies of animals, furnishes an artificial supply of nitrogen and hydrogen for the wheat and other crops which require more than the atmosphere can naturally supply them.

It is mal-practicing the art of agriculture, that is a suicidal policy, and is altogether unnecessary. It is possible to exhaust the soil sooner by a rotation of crops than otherwise, simply because it increases the yield and the quantity of the elements of plants yearly exported from the farm; but a judicious system of rotation and feeding not only increases the crops, but at the same time preserves the soil in more than natural fertility.

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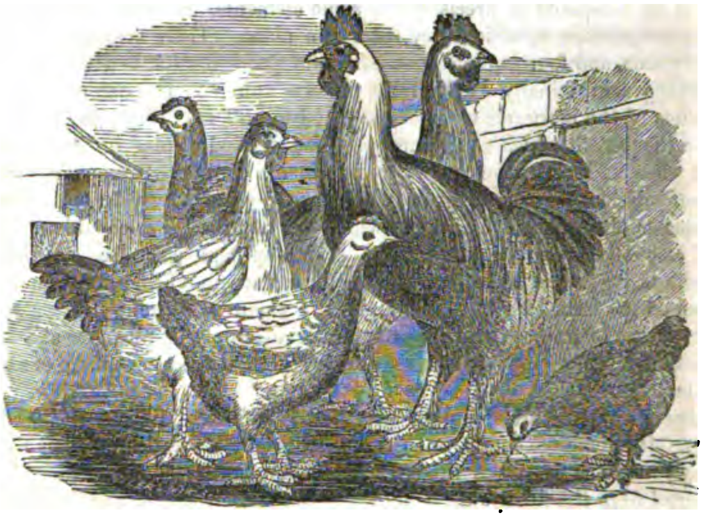
POULTRY—THE "HEN FEVER."

By reference to the premium list of the State Agricultural Society for past years, it will be seen that no premium has ever been offered for any of the "*fancy*" breeds of fowls. The only premium offered for which these fowls could compete, was that offered for "the best lot of Malay or Chittagong fowls." The present year is the first that any of the "*improved*" kinds have been mentioned, when an offer was made for "the best lot of Shanghae, Chittagong, or Malay fowls." Notwithstanding the evident intention of the officers of the Society to discourage the breeding of improved varieties, or their refusal to acknowledge them as constituting distinct varieties or breeds, yet nine-tenths of all the fowls exhibited at Utica were of this class—showing that the framers of the premium list have labored in vain to stay the popular current. Editors of several of the agricultural papers, too, have exerted all their powers of ridicule, having drawn largely on their imagination for portraits of what they call in derision Shang-*high* fowls, and exhibited at once their wit and their folly. We have invariably observed that those who have kept the Shanghae and Cochin China, speak in their praise; and those who so freely pronounce them a humbug, and no better than the common barn-yard fowl, know nothing of them by experience.

We have received something like a dozen inquiries, during the last two or three months, as to the merits of these fowls, and their superiority over the common fowl, some of our correspondents expressing the belief that the "hen fever is all a humbug, got up by speculators for the purpose of obtaining money under false pretences." Instead of answering each inquirer in our "*Answers to Inquiries*," we shall endeavor to satisfy all in this article. Having kept "*fancy*" fowls, and fowls that are not considered "*fancy*," for several years, we shall only give the teachings of our own experience. If any of our readers differ in opinion, and will give us the facts on which their opinions are founded, we will gladly make them public.

The *Cochin China* and *Shanghae* are much *larger* than our common fowls, probably averaging three times their weight. Of about fifty we raised last year, the smallest hen



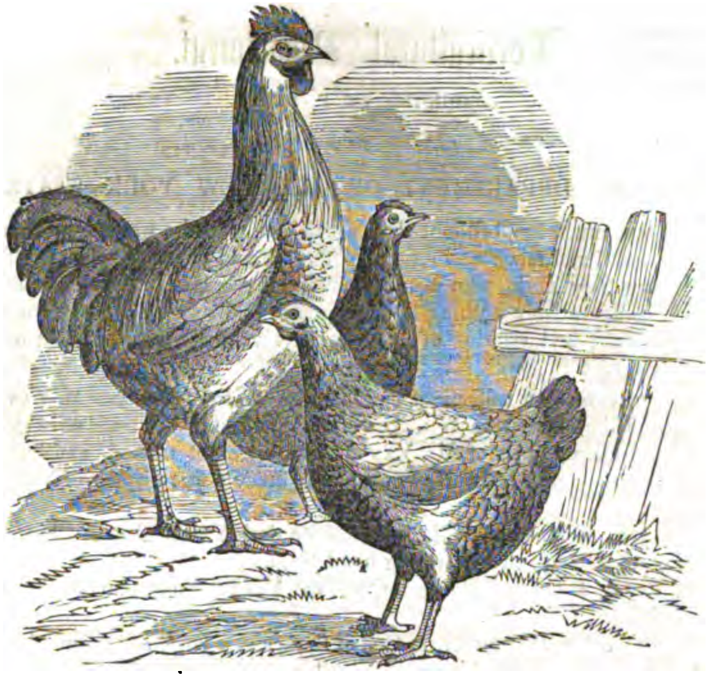
GROUP OF SHANGHAE FOWLS.

weighed six pounds, and the largest cock ten pounds, at one year old. They produce *more eggs* than any fowls we have ever kept. The hens often commence laying in less than three weeks after hatching a brood, and continue laying every day regularly, at the same time taking care of the chickens until they are able to care for themselves. We made a present of a pair of Shanghae fowls to a gentleman well known to all agricultural and horticultural readers. After a few weeks, happening to be at his place, we inquired how the fowls prospered, and was told that the hen had not layed. Thinking this strange, we asked to see what eggs they had, when we found between two and three dozen of the eggs laid by our pullet, which we readily recognized. On pointing out her eggs to our friend, he remarked: "My wife has several times observed that the hen that layed the yellow eggs, layed more than all the others." He had some half a dozen in all.

They are *good mothers,* but lay a large number of eggs before wanting to sit—generally from forty to sixty. The young chickens are very hardy—much more so than any others we know of. In several cases, when raising very late or very early chickens, we have had broods part Shanghae or Cochin China, and part common chickens, and lost nearly all the common without loosing one of the others.

The eggs of pullets the first year are small. Indeed, these fowls do not arrive at full maturity in less than eighteen months. For this reason we think it would be better to raise crosses to kill in the fall. We killed a dozen crosses last year, at about six months old, the smallest of which weighed six pounds dressed. They were from common hens and Shanghae cock. We also killed several Shanghae and Cochin China chickens at about the same age, taking a little pains to test the quality of the flesh, and disregarding the scripture injunction to call in the "halt, the lame, and the blind," invited a few of our friends who are good judges of what a fowl should be, and they were unanimously pronounced first rate, and no difference could be detected between the flesh of the crosses and pure bloods, as to fineness or flavor. There is some satisfaction in carving from a chicken that weighs from six to seven pounds.

The engraving of Shanghae fowls given in this article, were taken by an artist in our own yard. They range from six weeks to six months old. The Cochin China fowls are portraits of G. P. BURNHAM'S, of Massachusetts; and they bear such a striking



GROUP OF COCHIN CHINA FOWLS.

resemblance to our own stock, obtained from Mr. B., that we thought it useless to endeavor to take more correct likenesses. The difference between these two varieties is very slight, as is also that between the white and colored Shanghae.

That there is a good deal of humbugging and dishonesty in the chicken speculation, we too well know. We have before us a letter from a gentleman at Seneca Falls, who procured two dozen of White Shanghae eggs, at four dollars a dozen, of a person in this city, and the chickens were of all colors and all shapes, only two or three being white. We know of many others served in the same way. This same individual boasts that he has made a thousand dollars in the chicken speculation this season. He figured largely at the State Fair, and, we believe, took several premiums. We would advise our friends not to buy eggs, unless they know those with whom they are dealing to be honest. We saw at the State Fair a mongrel rooster (whose parentage we know all about, having ourselves brought the egg from which he was hatched from the east,) placed in a coop with a good hen, and labelled Cochin China; and we were told, after we left, the pair was sold for twenty-five dollars. One of our editorial brethren of the south was looking at a coop of mongrels, and observing to a friend that they were not as represented, and were not worth more than twenty-five cents each, when he was gently touched on the elbow and requested to "*speak low*," by the owner, who was making a bargain with some green-horn for these same fowls at twenty-five dollars a pair, and which bargain he was likely to spoil. There is no need of paying such extravagant prices at the present time, even for good fowls, as there are plenty of the Shanghae fowls, both white and colored, and also the Cochin China, pure and fine, that can be had in this neighborhood for five dollars per pair. We might fill another page with the misdeeds of some of the chicken dealers, but we have given enough to place our friends on their guard.

Horticultural Department.

CONDUCTED BY P. BARRY.

HORTICULTURAL DEPARTMENT OF THE NEW YORK STATE FAIR.

The floral tent was much less brilliant than usual, owing to the want of interior decorations, and very small and few contributions of flowers and flowering plants. The cultivators of Western New York, who usually make rich displays of flowers on such occasions, could do comparatively nothing in consequence of the severe drouth that prevailed previous to the Fair, and swarms of grass-hoppers that consumed almost everything that the drouth spared.

We noticed but two small collections of dahlias—one from Edward M. Van Alstyn, of Greenbush, and the other from Wm. Newcomb, of Pittstown. Both were good; but, if we are not mistaken, those of Mr. Van Alstyn were not named, and lost much of their value in consequence. Mr. Newcomb also made a fine display of verbenas and seedling phloxes.

Mrs. S. E. Smith, of Mechanicsville, presented a design worked with China asters.

Jas. Wilson, of Albany, two charming hand boquets.

Messrs. A. Frost & Co., of Rochester, two cases of verbenas, one of asters, and one of roses and dahlias.

Messrs. Thorp, Smith, Hanchett, & Co., of Syracuse, a large collection of pot plants.

Ellwanger & Barry, of Rochester, a collection of phloxes, verbenas, roses, petunias, &c., besides green-house plants and rare evergreen trees in pots.

Tasteful ornaments of various designs, moss baskets, beautiful boquets, &c., were contributed by Messrs. H. W. Rockwell, Jas. Van Namee, Silas D. Childs, and others, of Utica; Mrs. Dudgen, of New Hartford; Mrs. Bullard, and others. Most of the designs presented as floral ornaments were really chaste and pretty; but some of them, we are compelled to say, were shapeless monstrosities, at which all true taste must revolt; and we beg those who have mistakenly devoted so much labor to them, to expend it in future on objects that will do both themselves and the exhibition more credit.

The fruit department was well sustained. Indeed, we are inclined to think that, notwithstanding the earliness of the season, it was on the whole the most creditable branch of the entire show—the poultry and stove departments not excepted. The State was represented, by greater or smaller contributions, almost from one end to the other. Peaches were less abundant than usual, but pears so much better as to fully compensate for any such deficiencies. Apples and plums were also abundant and fine.

Among amateur cultivators we have to place Mr. Vail, of Troy, at the head, as having the finest collection of fruits on exhibition; the varieties were select and fine, and the specimens really superb. His *Doyenne Boussock* pears and *Jefferson* plums attracted general attention, as did all his varieties.

P. Brentnall, Esq., of Utica, exhibited twelve varieties of choice pears, in a very tasteful manner. We noted this as an excellent contribution.

Gen. Lewis Eaton and Prof. W. R. Coppock, of Buffalo, each presented a number of choice varieties.

Messrs. N. Hayward & Son, of Brighton, presented a very large and fine collection of apples—probably the best that any farmers in the State could show.

The nurserymen turned out in great numbers and strength. Messrs. C. Reagles & Son, of Schenectady, presented a fine collection of some thirty varieties, or more, of plums.

Mr. JOHN MORSE, of Cayuga Bridge, a large collection of pears—good sorts, and fair, well grown specimens generally, though not quite as good as he has heretofore shown.

Messrs. THORP, SMITH, HANCHETT, & Co., of Syracuse, presented some seventy varieties of pears, many of them quite new.

T. C. MAXWELL, of Geneva, presented a small collection of select pears—*Bartlett, Dearborn's Seedling, Flemish Beauty, Belle Lucrative, &c.*—all fine and handsome. Also, choice varieties of apples, among which a large dish of the *Primate* (once noticed in the *Farmer* as "*Rough and Ready*") attracted much attention.

JNO. C. HASTINGS, of Clinton, Oneida county, made a great display of various fruits, in large dishes of each variety.

Mr. HENRY FREEMAN, of Richfield, Otsego Co., made a handsome display of apples; and we were particularly glad to meet them from that locality. He had *Red Astracans* yet in good condition, and we noted two or three varieties of merit that are not much known. We are glad to see Otsego county enter the list of fruit growers, and with so worthy and intelligent a representative as Mr. FREEMAN.

E. G. STUDLEY, of Claverack, Columbia Co., contributed some fine samples of apples, among which are some new to our part of the State.

Preserved Fruits.—Mr. and Mrs. W. R. SMITH, of Macedon, exhibited some dozen glass jars of peaches, cherries, &c., in very tasteful style. These fruits are preserved neither in vinegar nor alcohol, but in their own natural juice. Last winter we had a jar or two of their peaches, and on opening we found the flavor little different from that of fruit just taken from the tree. This is a most useful art, and Mr. and Mrs. SMITH are improving it and practicing it on a most extensive scale.

Foreign Grapes.—Hon. JOHN GREIG, of Canandaigua, presented some very fine bunches of *Black Hamburgh*, and several other varieties. H. L. SUYDAM, of Geneva, exhibited *Black Hamburgh, St. Peter's, and Zinfindal*—superb bunches, from 2½ to 3 pounds each, well colored, and fine. We presume they took the premium. Mr. SUYDAM is a most zealous and successful amateur cultivator.

We will take this occasion to suggest an improvement much needed in the way of showing fruits offered for special premiums at these shows. There was a premium of $10 offered for the best twenty varieties of apples. Now, the proper way would have been for all the collections offered for this premium to be placed together, side by side, without the names of the growers, but merely the numbers of entry, until after the decision of the judges. Instead of this, they were scattered about in all parts of the tent, and gave the committee a great deal of unnecessary labor; and their decisions can not be so correct as they would have been in the other case. It was the same in regard to pears and other fruits, and we trust it will receive attention before another exhibition. We will take another occasion to speak of it.

There was a premium offered for "the best collection of newly introduced pears, with description," &c. Now we consider it scarcely less than absurd to require a cultivator not only to grow the fruit and present it properly labelled, but accompanied with a *description*. It might happen that the person who presented the best collection of new pears, had not fruited them before; and how could he give a description of them? It might not be improper to ask that native and foreign sorts should be respectively so designated, but such an unreasonable condition as that alluded to is in reality a *tax* upon the introduction of new fruits, which those who made out the premium list perhaps thought it best to impose.

We have to make special mention of a fine collection of pears, consisting of 104 varieties, shown by Messrs. HOVEY & Co., of Boston. They were very valuable as affording an opportunity to compare the growth of distant parts of the country, and to aid in correcting errors in nomenclature, where such existed.

The nurserymen and fruit growers held several evening meetings during the Fair, and had some pleasant and profitable conversations, to which we will hereafter refer. On the whole, we believe they enjoyed the opportunity of meeting as well as any other class of men, and returned home well satisfied that their time was not lost.

We have not seen the reports of committees.

In the vegetable department the display was excellent. Indeed, we do not remember having seen a better at any previous Fair. Beets, cabbages, onions, sweet corn, Lima beans, squashes, pumpkins, tomatoes, carrots, celery, watermelons, muskmelons, potatoes, parsneps, egg plants, leeks, parsley, and indeed all the common garden vegetables, were shown in remarkable perfection. The tent appropriated to this branch was filled to overflowing, and very few inferior, poorly grown articles, were to be seen. We have never seen so many Lima beans exhibited at any show in this State, and we are very glad to see this finest of all beans receive increased attention. Potatoes, too, were exhibited in unusual abundance and perfection. Mr. C. E. GOODRICH, of Utica, made a large display of seedling varieties, said to have been grown under the direction of the State Agricultural Society. We had not sufficient leisure to examine them minutely, but we have no doubt our agricultural friends gave them due attention. Mr. G. was imparting some very valuable information, in regard to his experiments. We were particularly struck with the fine appearance of the "*Mexican*" potato in several collections, and with a variety called the "*Mackinaw White*," shown by Mr. S. H. ADDINGTON, of Marshall, near Utica. It strikes us that the attention now given to the potato, must result in great improvement. The principal contributors in this department were, Messrs. E. WILLIAMS, C. SPRATT, C. A. MANN, C. E. GOODRICH, and W. GRAY, of Utica; JAMES HALLOCK, of Whitesboro; JACOB NEW, of Canandaigua; V. W. BOYCE, Ithaca; S. H. ADDINGTON, of Marshall; N. & E. HAYWARD, of Brighton; C. F. CROSMAN and THEODORE BACKUS, of Rochester.

Rustic Work.—We had almost forgotten to mention two or three fine specimens of rustic work exhibited in Floral Hall, from a Socialist or Fourierite community in Oneida county. Two of the finest rustic chairs we have ever seen, combining great strength with elegance of design and completeness of execution; one was valued, we were informed, at $30, and the other at $15. A picture frame, from the same source and in the same style, was greatly admired. Would it not be well enough for the Society hereafter to offer suitable premiums for cottage and garden rustic work of this sort?

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THE POMOLOGICAL CONGRESS.

THIS body met according to appointment, in Philadelphia, on the 13th September. There was a large attendance of delegates from several States, and a most imposing display of fruits. The President, Dr. BRINKLE, in conjunction with the Pennsylvania Horticultural Society, had made all proper arrangements for the meeting, so that there were no difficulties or obstacles to be met or overcome. The proper business of the Convention was at once entered upon, and proceeded with the greatest regularity, harmony, and dispatch. The first day was consumed in arranging the fruits, choosing officers, and organizing committees. Very little, we believe, was done in the way of discussing the merits of fruits. The retiring President, Dr. BRINKLE, who has most ably and faithfully discharged his duties, delivered an address abounding in useful suggestions for the future, and noting the more important events of the past year, such as the death of members of the Society, &c. The address was timely and able, and is justly considered as laying a broad and firm basis for future action. The second day, the various committees entered upon their duties, and the Convention proceeded with the completion of the lists of officers and committees, and at intervals with discussion on fruits.

At the close of the second day the members felt that, although the time fixed upon for adjournment had come, they were just prepared to commence a profitable session. A large number of them, ourself included, had been nearly all the time engaged on committees, and had enjoyed no opportunity for an interchange of opinion on the subjects that had been brought forward. We believe it is the general determination to occupy an entire week with the next session; and this we think will be absolutely necessary, in order to accomplish much practical good.

The Hon. M. P. Wilder pronounced an eulogy on the character of the late Mr. Downing, on the evening of the first day, in the Musical Fund Hall. The audience was large and select, and a mournful, solemn stillness pervaded it, indicative of a deep and melancholy interest in the theme of the oration. It was an able and elegant production, and will be published with the proceedings.

The following is a list of the officers chosen:

President.—MARSHALL P. WILDER, of Massachusetts.

Vice Presidents.—One from nearly every State and Territory, including the Canadas, California, and Oregon.

Secretaries.—F. R. Elliot, of Ohio; James H. Watts, of New York; H. W. S. Cleveland, of New Jersey.

Treasurer.—Thos. P. James, of Philadelphia.

Executive Committee.—Dr. W. D. Brinkle, of Philadelphia; B. V. French, of Massachusetts; Mr. Peters, Dr. H. Wendell, Albany, N. Y.; Dr. J. A. Warder, Cincinnati; and the President, and 1st Vice President ex-officio.

Committee on Foreign Fruits.—C. M. Hovey, Massachusetts; P. Barry, Chas. Downing, J. P. Kirkland, New York; R. Buist, Pennsylvania; S. L. Goodall, Maine; C. B. Lines, Connecticut.

Committee on Native Fruits.—W. D. Brinckle, Pennsylvania; F. R. Elliot, Ohio; E. Tatnall, Jr., Delaware; Thos. Hancock, New Jersey; Col. Hodge, New York; H. P. Byram, Kentucky; Robert Manning, Massachusetts.

Committee on Synonyms.—J. S. Cabot, Massachusetts; J. J. Thomas, New York; A. H. Ernst, Ohio; J. A. Kennicott, Illinois; S. D. Pardee, Connecticut; A. Gaul, New York; J. D. Fulton, Pennsylvania.

Chairmen of State Fruit Committees, (each one having power to select such persons, in his own State, as will constitute a complete and efficient committee.)—*General Chairman*—Samuel Walker, Roxbury, Mass. New York—P. Barry, Rochester. Pennsylvania—Thomas P. James, Philadelphia. Delaware—Dr. Lewis P. Bush, Wilmington. District of Columbia—Joshua Pierce, Washington. Georgia—Stephen Elliott, Jr., Savannah. Virginia—Yardley Taylor, Purcell's Store, Loudon Co. Maine—Hy. Little, Bangor. New Hampshire—H. F. French, Exeter. Massachusetts—Ebenezer Wright, Boston. Vermont—C. Goodrich, Burlington. Rhode Island—Stephen H. Smith, Providence. Connecticut—George Gabriel, New Haven. New Jersey—Wm. Reed, Elizabethtown. Maryland—Samuel Feast, Baltimore. South Carolina—Wm. Sumner, Pomaria. North Carolina—Henry K. Burgwyn, Jackson. Ohio—R. Buchanan, Cincinnati. Illinois—J. A. Kennicott, Northfield. Indiana—J. D. G. Nelson, Fort Wayne. California—Capt. F. W. Macondray, San Francisco. Alabama—Charles A. Peabody, Gerard. Florida—A. G. Sems, Quincy, Gadsden Co. Kentucky—E. D. Hobbs, Louisville. Mississippi—Thomas Affleck, Washington. Iowa—James Grant, Davenport. Missouri—Thomas Allen, St. Louis.

A constitution was adopted, in which the name is changed to "American Pomological Society," and membership fixed at $20 for a life member, and $2 for a biennial membership.

A resolution was offered by Mr. Robert Buist, and adopted, appointing a committee to raise a fund of $20,000 or more, in subscriptions of $1 and upwards, to be invested for the benefit of the widow of the late Mr. Downing, or to be expended otherwise in some fitting monument to his memory. The President, Robert Buist, Caleb Cope, H. W. S. Cleveland, B. Hodge, F. R. Elliot, L. Young, D. W. Breckenridge, and J. A. Kennicott, constitute such committee.

J. S. Cabot, Esq., President of the Massachusetts Horticultural Society, invited the Pomological Society to meet in Boston in 1854, and a resolution of adjournment was passed to that effect.

The details of the doings of the Society will soon reach us, and we shall then make such extracts from the proceedings, in regard to the merits of fruits, &c., as we shall consider of more immediate interest.

THE PENNSYLVANIA HORTICULTURAL SOCIETY.—The day after adjournment, we had an opportunity of glancing over the splendid exhibition of the Pennsylvania Horticultural Society. The great hall formerly known as the Chinese Museum, was filled with pot plants, floral ornaments, and cut flowers. A fountain was playing away in the center, and close to it was a *pond*, on the bosom of which floated the gorgeous and wonderful water lily, *Victoria regia*. The specimen was small, but perfect. We noticed very large and fine old specimens of exotics, such as collections of half a century's standing could alone produce. The smaller plants were no way remarkable—at least, not remarkable for their beauty—and were so mixed up for the purpose of heightening the general effect, that they could not be well examined. The *Manetlia* was trained into pretty figures, on wire; and being in full bloom, they were the most ornamental, and we think the most tasteful objects in the room. The display of cut flowers was quite below what we anticipated seeing. We noted but two or three collections of dahlias. The season has been rather unfavorable for dahlias almost everywhere, as far as we are aware.

The fruit and vegetables were shown in a hall above that devoted to the flowers, and the display of these was, in our opinion, much better than the floral; it as much exceeded our expectations. as the other fell below. The fruits were large, beautifully colored, and exhibited in large quantities, making a magnificent appearance. The size of some of the specimens surpassed anything we have seen. We had here the pleasure of making an intimate acquaintance with some Pennsylvania varieties we much desired to see at home. The show of vegetables, too, was exceedingly rich; the articles were grown in great perfection, and shown in profusion and excellent taste. There are good practical gardeners about Philadelphia, and they receive ample encouragement from a wealthy, refined, and liberal population. The markets are proof of this.

We can not now go further in noticing objects and matters of interest, but will add that our visit was a most pleasant one—by far too short. We await an opportunity to reciprocate the kind attentions shown us.

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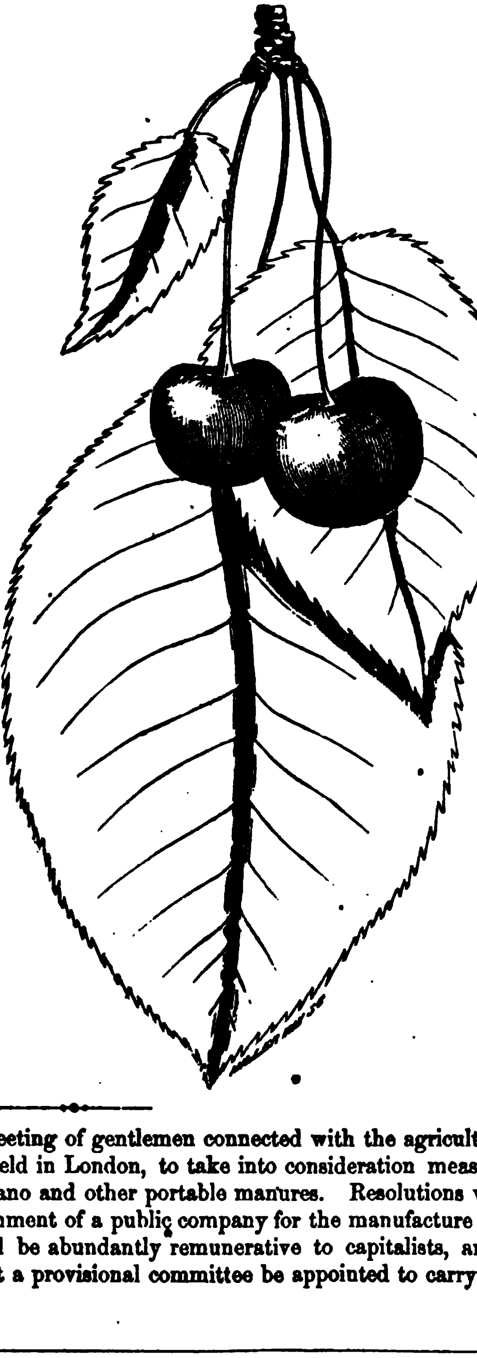
PEARS THAT SUCCEED WELL ON THE QUINCE.—During the State Fair, at Utica, a few nurserymen and fruit growers held evening meetings, for the purpose of conversation or discussion on topics connected with fruits and fruit culture. Among other subjects that came up at these meetings, was, "What pears really succeed well on the quince, after several years' trial?" The question was put, we believe, by J. J. THOMAS, and it was proposed that each one present should name such varieties as they had sufficient experience with. The following varieties, and probably a few others, were then named: *Louise Bonne de Jersey*, *Glout Morceau*, *Vicar of Winkfield*, *Urbaniste*, *Beurre Diel*, *Beurre d'Amalis*, *Panache*, *Long Green*, *Long Green Striped*, *White Doyenne*, *Duchesse d'Angouleme*, *Bergamotte Cadette*, *Easter Beurre*, *Doyenne d'hiver d'Alencon*, *Stevens' Genesee*, *Henry IV*, *Summer Francreal*, *Fig*, *Napoleon*, *Gray Doyenne*. We believe no one objected to any of the above twenty varieties, except *Stevens' Genesee*, with which some thought there had not yet been sufficient experience. *Urbaniste* was stated to be a slow and poor grower on the quince when young, but to improve with age.

Of gentlemen present who participated in the remarks and doings, we remember WM. R. PRINCE, of Flushing; C. M. HOVEY, of Boston; JOHN J. THOMAS, of Macedon; Prof. COPPOCK, of Buffalo; Dr. J. A. WARDER, F. R. ELLIOT, and M. KELLY, of Ohio; H. E. HOOKER, of Rochester. There is something definite and reliable in this kind of information.

THE MERVEILLE DE SEPTEMBER CHERRY.

Some five or six years ago we received a cherry under this name, from France. We had little faith in its being of much value, and hence propagated it very sparingly. On its coming into bearing, some two or three years since, we found it small, rather dry, and of indifferent flavor, and concluded it was nearly worthless; but we find, as the tree grows older, the fruit improves both in size and quality; and this year we had two trees that bore a fair crop of handsome fruit, not first rate, but of fair quality, and ripening at an extraordinary season for a sweet cherry—the beginning of September; and if let alone by the birds, would last through the greater part of that month.

The fruit is medium size, dark purplish red, when fully ripe, resembling in size and color the *Early Purple Guigne.* The flesh is rather firm, sweet, and pleasant; must be fully ripe to be in its best condition, and appears ripe long before it is so. Worthy a place in large collections, as being the latest sweet cherry known. The tree is an erect, rapid grower, like the heart varieties, and bears fair crops. Fruit improves as the trees grow older. Season, Sept.



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Our space is so much occupied with notices of the Pomological Congress and the fruit exhibition of our own State Society, that we are compelled to omit other matters that should have appeared in this number.

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Manufactured Manures.—A meeting of gentlemen connected with the agricultural interests in England, was recently held in London, to take into consideration measures for the reduction of the cost of guano and other portable manures. Resolutions were passed to the effect that the establishment of a public company for the manufacture of a *cheap* manure *equal to guano*, would be abundantly remunerative to capitalists, and a great national advantage; and that a provisional committee be appointed to carry out that object.

Editor's Table.

New York State Fair.—The annual exhibition of the New-York State Agricultural Society took place at Utica, on the 7th, 8th, 9th, and 10th of September, being nine days earlier than that held at Rochester last year. This alteration brought the Fair just at the busiest time of wheat sowing, and this may in part account for a considerable diminution in the number of farmers present. There was, however, on the whole, no diminution in the quality of articles exhibited, and some of the departments were superior—that of dairy products in particular. Utica being in the center of a dairy district, we expected a first rate show of cheese; but in this particular the Fair exceeded our most sanguine expectations. There were also three new cheese presses exhibited, which struck us as being improvements on all we have before seen.

In the stock department, the Durhams and Devons were well represented, both in respect to quality and numbers. There were but few Herefords and Ayrshires shown, but they were of superior character. There was one lot of Alderneys exhibited by Roswell L. Colt, of Patterson, N. J. This breed of cattle is very small, and it is next to impossible to fatten them; but they are said to yield richer milk, and more of it for a given amount of food, than any other. There was a good show of grade cattle, and also a very large number of good working cattle—more so than at any preceding Fair we have visited.

In farm and carriage horses, the show was not creditable, and we should judge was by no means a fair representation of the horses in the district. There was a goodly number of superior stallions and brood mares; and had we seen but these, we should have supposed the surrounding counties well supplied with superior working horses.

As fodder of all kinds is likely to be exceedingly scarce this coming winter, and there will therefore be a large demand for hay and cornstalk cutters, we were glad to see so many on exhibition from all sections of the country. One manufactured by Taylor, Thomas, & Co., 125 Pearl street, N. Y., on an entirely new principle, appeared to do the work with great ease and rapidity.—"Webb's patent," exhibited by J. E. Dutton & Co., of Oswego county, did its work first rate.

The number of sheep exhibited was small, and, on the whole, by no means superior. There were, however, a few good specimens of the various breeds. J. D. Patterson, of Westfield, Chautauque county, N. Y., had some splendid French Merinos, and we believe took the first premium for the best pen of five ewes, and for the best buck. Sharp & Taylor, of Lockport, N. Y., also exhibited some beauties, recently imported by Jewett & Co., of Vermont. They obtained the premium for the second best pen of five ewes, and for the second best buck, and also the first premium for a yearling buck. Reed Burritt, of Burdett, N. Y., exhibited a fine Silesian buck. In Long and Middle Wooled sheep there was but an indifferent show. John McDonald, of Warren, Herkimer county, N. Y., had a pen of eight Leicester ewes, which pleased us exceedingly. Mr. Wakeman, of Herkimer, N. Y., exhibited some very fine South Downs, as also did Col. Sherwood, of Auburn.

The show of hogs was small, but of very superior quality. (We wish this was a more general characteristic of our Fairs.) A. L. Fish, of Litchfield, Herkimer county, N. Y., exhibited a pen of Suffolks, which were very fine, and attracted considerable notice. This is a small breed, but matures early, and lays on fat with great rapidity. A pen of four, under one year old, of a "small breed," belonging to James Platt, of Attica, N. Y., was very fine. There were also some very good Berkshire and Yorkshire sows, and some excellent crosses. We expected to have seen some of the Chinese breed, but were disappointed.

In the poultry department the show was excellent and very attractive.

In agricultural implements and machines the show was good, but not so extensive as was expected. J. Rapalje & Co., Rochester, had a large assortment of all kinds of implements and machines. Emery & Co., and Wheeler, Melick, & Co., of Albany, were on hand with their celebrated Horse Powers, which attracted considerable attention.

The Reapers, Mowing Machines, Drills, &c., received close attention, and were much admired.

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We have to acknowledge the receipt of various favors from our friends, in the form of ripe fruit, &c. To friend Parks, of Victor, we are indebted for fine watermelons; to H. H. Gunter, of Gunter's Hotel, New York, for a barrel of sweet potatoes. If any of our friends visit New York city, they will find Mr. G. always at home, and attentive to their wants, at his house, 145 and 147, Fulton street.

Death of J. P. Norton.—While at the State Fair, we heard the melancholy intelligence of the death of J. P. Norton. For some years Mr. Norton has been at the head of the department of chemistry applied to agriculture, and the phenomena of vegetable and animal life, in Yale College. Prof. Norton, though but a young man, only 30 years of age, had spent three years in Europe, under eminent professors in Great Britain and on the continent, and has devoted his time and talents principally to the investigation of chemistry as applied to agriculture. Many of our young men have had the benefit of his instructions, in college, and his contributions to the agricultural press have been invaluable. In the death of Norton and Downing, the friends of agriculture and horticulture have lost their brightest lights, and truly have cause to mourn. But they did a good work while the day lasted. Let us follow in their footsteps.

Terra Culture.—Some correspondents have inquired whether the lecture and disclosures of Mr. Comstock are worth the price charged—one dollar. If we should lecture on the importance of *doing every thing in season*—leaving nothing for the morrow that can be done to-day,—and should spend an hour in enforcing this rule upon our audience, perhaps nine out of ten might receive a dollar's worth of benefit from our lecture. Still, we might say nothing new—nothing but what others know as well as ourselves. The facts stated by Mr. Comstock, are mostly to be found in horticultural works; and the little there is new in the lecture, and which Mr. C. calls his *secret*, we think is not sustained by facts. Mr. Comstock shows very little knowledge of vegetable physiology. His pretensions to prevent the potato rot, the destruction of wheat by fly, weevil, &c., is the sheerest humbug. What there is *good* in the lecture, every intelligent cultivator knows; and what there is *new*, is at least very doubtful.

State Fairs.—The State Fairs this year have generally been unusually successful. We shall give notices of several next month.

B. P. Johnson, Esq., of Albany, will accept our thanks for his interesting work on the World's Fair of 1851.

Advertisements, to secure insertion in the *Farmer*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance.*

Agricultural Fairs.—Below we publish all the agricultural Fairs to be held this fall that have come to our knowledge.

STATE FAIRS.

Pennsylvania, at Lancaster,..........	Oct.	20, 21, 22
New Hampshire, at Meredith Bridge,.	"	6, 7, 8
Indiana, at Indianapolis,..............	"	19, 20, 21
New Brunswick, at Frederickton,.....	"	5 to 9
Wisconsin, at Milwaukie,...........	"	6, 7, 8
Georgia,..............................	"	18 to 23
Maryland, at Baltimore,...............	"	26, 27, 28, 29
American Institute, at New York,....	"	5
" Exhib. of Stock,..	"	19, 20, 21

COUNTY FAIRS.

Genesee,..............................	Oct.	6, 7
Cayuga, at Auburn,...................	"	6, 7
Putnam, at Carmel,...................	"	5, 6
Richmond,............................	"	17
Dutchess, at Washington Hollow,.....	"	5, 6
Westchester, at White Plains,........	"	6, 7, 8

Inquiries and Answers.

(Edward Hedley, Medina.) We do not know that there are any rabbit warrens in this or adjoining States. Have never seen the silver grey rabbit in this country.

(H. M. B., Oswego county, N. Y.) **Swamp Muck.**—The value of swamp muck, and the purposes for which it is best adapted, depend a great deal on the location in which it is formed. It is therefore impossible for us to say arbitrarily whether it would or would not be of much value as a manure for light gravelly soil.

Muck, like peat, is very insoluble, and incapable of furnishing its elements of fertility to plants until decomposed. To decompose it, however, is not an easy matter, owing to its antiseptic properties. Composting it with caustic lime or ashes, will decompose it most readily; but as these substances set free any ammonia the muck may contain, and facilitate its escape, they should not be used for this purpose. A good plan is to throw it up loosely in the fall, in some dry place, and let the frosts of winter pulverize and dry it. When dry, it may be placed in alternate layers with fresh horse manure, sea weeds, or any rapidly fermenting substance. If, too, the heap is so placed that the liquid manure of the barn-yard could be pumped upon it, so much the better. In this way it rapidly decomposes, and a manure is obtained which is valuable for most cultivated crops, especially for beets, turneps, cabbages, and other vegetables, and well repays the labor. Dry muck is also of much value as an absorbent of liquid manure, and may advantageously be used for that purpose on all farms where readily obtained. Will some of our readers who have used it, give us their experience in the best methods of digging, drying, and decomposing it, and the effects produced.

Guano on Wheat.—How shall I apply guano most profitably to wheat? And what is the best method of preserving grapes in their natural state, for winter use? C. W. —*Pleasantville.*

The best time to apply guano to the wheat crop, is in the fall; such is the result of experiment. As regards the best method of application, much difference of opinion exists; not so much, however, among practical farmers, as among the ranks of agricultural chemists and mere theoretical farmers. Some contend that there is a great loss of ammonia (the principal element of guano, of value to the wheat plant,) if applied to the soil, without some chemical means being used to fix it. Gypsum (sulphate of lime) is recommended for this purpose; likewise common salt, charcoal dust, and peat, have their several advocates.

If gypsum would fix the ammonia of guano, by converting it into the sulphate of ammonia, we would say, always mix plaster with the guano previous to sowing. *But it will not.* When perfectly dry, it has no effect at all on guano; but when slightly moistened with water, and allowed to remain for some time, not only will it not fix the ammonia, *but actually liberates it, and is therefore worse than useless.* It is perfectly true that, in a chemical sense, sulphate of lime will decompose carbonate ammonia, forming the fixed salt sulphate of ammonia, and the insoluble carbonate of lime. But chemists always operate with their substances in solution, and it is only when sulphate of lime is in solution that it will fix carbonate of ammonia; so that it is of no use mixing gypsum with guano, for the purpose of retaining the ammonia.

The ammonia of guano, in its unmixed state, will probably escape to some extent on exposure to the air, in consequence of decomposition; but we believe that as soon as the guano is mixed with the soil, there is no longer any evaporation of ammonia. It is known that several kinds of soils will *attract ammonia;* and the experiments of Mr. Way show that some soils retain it with great tenacity.

In sowing guano on wheat, therefore, we think it a waste of time, to say the least, to be at any trouble in trying to fix the ammonia. Our method has been first to break the lumps of the guano until they would pass through a seive, and then re-bag, take it to the field, and sow it alone at the rate of two to four cwt. per acre, dragging it in immediately, sowing the wheat at the same time. This way answers well, and we know of no better.

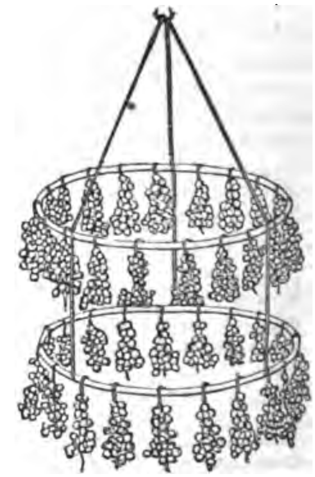
In England, guano is often sown on the young wheat plant in early spring, and answers a good purpose in this way; but fall sowing is there considered the best by most farmers who have tried both plans.

If our friend tries guano on wheat, we hope he will let us know the result.

If it was but half its present price, the application of guano on wheat would be attended with great profit. At the present relative prices of guano and wheat, it may pay to use it, yet the prospect of *profit* is not very bright.

Preserving Grapes.—We find no difficulty in preserving grapes in a very simple way. This year we had fine *Isabellas* in abundance as late as the 20th of April. We pick the grapes on a dry day, cut out with scissors any imperfect or bruised berries, and then spread the bunches on the floor of a vacant room, or on shelves, first covering the floor with paper. We let them lie in this way about a week, and then pack them away in boxes, putting a layer of cotton batting between each layer of grapes. The boxes we put in a cool, dry place. Last year we appropriated a closet in the upper part of the house, for the purpose; and a party of friends who "tasted" our last dish of grapes, unanimously declared they were as fine as when first taken from the vines.

While on this subject, we give a new method, adopted to some extent in France, which we take from the *Albany Cultivator:*



"A new method of keeping grapes in winter has been practiced in France, consisting essentially in hanging up the bunches separately, *by the smaller end* on wire hooks. Small wires, of sufficient stiffness, and a few inches in length, are bent into hooks in the shape of the letter S: one end is passed into the smaller end of the bunch, and the other placed upon a suspended hoop, as shown in the annexed figure. The position of the bunches causes every berry *to hang away from its neighbor*, and consequently they are less liable to rot by contact, than by any other arrangement.

The hoops are suspended by three cords or wires to a button overhead, like the hook of a baby-jumper; and any convenient number of hoops may be hung successively under the first. The center of the fruit room may be thus occupied; and the walls may be covered by passing horizontal wires around the walls, and about a foot from them, to receive the hooks for the suspension of the bunches.

This will be found much more perfect than the more common practice of keeping grapes upon shelves or in drawers. It is hardly requisite to remind those accustomed to the successful keeping of grapes, of the necessity of careful picking, the removal of imperfect or decayed berries, and of avoiding too much moisture in the fruit room on the one hand, and of such a degree of dryness on the other as to cause wilting. The former may be prevented by chloride of lime, which absorbs moisture rapidly; and the latter by keeping the fruit room (which may be only a few feet square,) *hermetically sealed*—opening the door but once a week to examine the fruit and remove any bad berries. The necessity of excluding frost is of course obvious.

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SALT ON WHEAT.—What is the value of salt as a manure for wheat? H.—*Rochester, N. Y.*

If a soil is deficient in soda, common salt (which is a chloride of sodium) will supply it; and in thus supplying an actual deficiency, will be of great benefit. But soils, unless under uncommon management, are never exhausted of soda; for such is the constitution of most soils, and that of most plants grown on them, that phosphoric acid and potash would be exhausted long before soda; and as plants will not grow at all without phosphoric acid and potash, the soil could not be exhausted of soda, unless these elements had been artificially applied *alone*. Salt, then, as an actual fertilizer, we believe will do no good;—in other words, it will do no good as supplying an actual constituent of the plant. It will check *over luxuriousness of growth*, giving a stiffer and brighter straw. Prof. WAY thinks it probable that the good effect of salt, as recorded by some experimenters, is owing to the fact that the double salt of silicate of alumina and ammonia is more soluble in water impregnated with salt, than in common rain water; and that on some soils, therefore, an application of salt will be attended with considerable benefit, by rendering the silicate of ammonia available to the plant; so that an application of salt is equivalent, on that crop, to an artificial supply of ammonia. Further experiments, which are now being instituted, will doubtless throw considerable light on this interesting subject.

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SHEEP RACK.—Mr. BAINBRIDGE, of Romulus, wishes to know the best form for making cattle and sheep racks, and by your request, I will give you my plan of a sheep rack. Take a plank 12 feet long, 2 inches thick, and 16 inches wide, and draw a line 4 inches from the edge all around the plank; then space it 8¼ inches apart, and with a ¾-inch augur bore your holes 1¼ inches deep in the center of the spaces you have made in the line; then make your slats or rounds 15 inches long, and put them in the holes around the plank; then take two more plank 12 feet long, 12 inches wide, and 1¼ thick, and bore holes in the lower edge 1¼ inches deep, to correspond with the lower holes; then put the plank on the top of the slats; let the slats continue around the end of the rack as the sides; nail the ends to the side. The bottom will be eight inches wide and the top 16 inches; and if you please, you can put a cover on the top of your rack, to prevent the snow and rain getting on your fodder. This will make a rack for 25 sheep. You will see that the line is drawn 4 inches from the edge of the lower plank. This is done in order to form a manger. Take a strip of board 4 inches wide, nail on the edge of the plank all around, and this will form a good feed box. Take two pieces of timber about four inches square, and 3 feet long, pin them to the bottom of the rack about two feet from the ends, frame in the ends of your cross pieces a post 15 inches long to stand on, and so that it can be moved when you wish. J. F. HOPKINS.—*Catharine, N. Y.*

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HORTICULTURAL.

(J. J., Galt, C. W.) MAZZARD CHERRY.—Neither of those described is the *Mazzard;* that of which you give a sketch, is the *Prunus padus*, or bird cherry. The *Mazzard* resembles the cultivated heart cherries in both tree and fruit, and is therefore easily distinguished from those you refer to.

BUCKTHORN is quite different from the common thorn found in your forests, belonging to a different genus, (Rhamnus.) We would most decidedly prefer a good Buckthorn or Osage Orange hedge around a ten acre field, putting expense out of the question, to any wooden fence. We lately saw some fine samples of Honey Locust hedge, that convinced us of the practicability of making first rate farm hedges of this plant. The Osage Orange stood the last severe winter here very well in a hedge, and we have little doubt of its entire success.

BOOKS.—*Gray's Genera of the Plants of the United States;* rather an expensive work, but complete, and just what you want, as near as it can be had.

(H. B. C., Alleghany county, Pa.) The wild rose, well managed, will make a good hedge; but an objection to it is, it throws up too many suckers. The seed of this and thorn should be buried a foot deep, or so, in dry, loamy soil, and left there for a year before sowing. They do not generally vegetate the first season.

The Fruit Garden can be sent by mail. Price, $1.25

(J. W. H., Saratoga.) We are not acquainted with what you call "Cape Gooseberry," but may know it by another name. Will be glad to see them.

A Fruit and Model Farm and Nursery for Sale.

SAID farm received the premium in 1851, of the Alleghany County Ag. Society. It contains 100 acres of upland, with ten running springs. 800 bu. wheat, 400 bu. oats, one field corn, and 40 tons of hay, are about the product per annum. The orchard contains 2000 bearing fruit trees of 16 years growth, with grapes, strawberries, raspberries, and all kinds of berries, &c.

The buildings cost $5000, five years ago, and consist of a brick house, bank barn, tenant house, two stone milk-houses, with all other out-buildings, &c.

100,000 nursery trees, from one to six years old. 25,000 will be fit to transplant the coming season, and my foreman will superintend it if desired, who has done so for the past five years.

Said farm is situated 4½ miles south from the city of Pittsburgh, on the Washington turnpike road, and will be sold at a bargain, and possession given in thirty days.

Terms—$6,000 in cash; ballance from five to ten years, with interest, secured by bond and mortgage.

Having no sons, and health having failed, and age is coming on, are the reasons I offer my residence at so great a bargain. J. L. SNYDER.

Green Tree, Allegany Co., Pa., Oct., 1851.—10-1t*

Monroe Nursery.

TO those who have purchased trees of me, at the Monroe Nursery, it is unnecessary to say anything here; but the public generally I would recommend to call and examine my stock of trees, for they are, without doubt, the most thrifty and stocky that can be found in any nursery around. It is true, I can not boast of 100,000 of one kind, 100,000 of another, 50,000 of another, &c.; but this I can say, that I have 40,000 fine, thrifty, well grown apple trees, three and four years old, all of the best leading varieties, ready for delivery this fall. Also, cherries, pears, peaches, &c., in like proportion, all of which are offered low, and very low to wholesale jobbers.

My facilities for obtaining buds and scions from bearing trees, are likewise unsurpassed by any other nursery, having, since I have owned and carried on the nursery, (now going on ten years,) set out new standards of all the best leading varieties, all of which are in bearing condition.

CHARLES POWIS.

Greece, Ridge Plank Road, Oct., 1850.

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no farther preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

A Novel for the whole Union will be published soon.

NORTHWOOD; or, Life North and South, showing the true character of both: By MRS. SARAH J. HALE. Illustrated.

"He who loves not his country can love nothing."

The intention of this deeply interesting novel is to illustrate the dignity of labor, and show the influence of American Institutions on the character of our people both North and South. It is a book for the Nation: nothing partisan or sectional has swayed the mind of the authoress. Mrs. Hale is not tinged by any of the isms of the day, but is above any female writer of our country; a true representative of the moral dignity and grandeur of woman.

H LONG & BROTHER, No. 43 Ann street, N. Y.

This work can not fail to have a large sale, and the trade are therefore requested to send in their orders early.—Bound in cloth, price $1; paper covers, 75 cents.

N. B.—D. M. DEWEY, wholesale and retail agent for Western New York.

Wheeler's Patent Railway Chain Horse Power and Overshot Thresher & Separator.

THE superiority of Wheeler's Patent Railway Chain Horse-Power, and Overshot Thresher and Separator is universally acknowledged. Thousands of them are in use, many of which have threshed from 50,000 to 100,000 bushels of grain, and are still in good condition. Probably more than four times as many of these machines were sold during last year as of any other kind. They are beyond doubt the most durable and economical machine in use. Their capacity has been tested by repeated trials as well at the New York and Pennsylvania Fairs as on several private occasions in competition with another machine made in this city which has been advertised to be far superior to ours, and in every instance the result has been about one *third* and in some instances more in favor of our machines. In every case except one, where we have submitted our machine to a *working* test at Fairs, it has taken the highest premiums; and in that excepted case the committee decided that our machine performed its work in [illegible] minutes and its competitor in 11¾ minutes, being nearly one-third in favor of ours.

We have also exhibited ours in competition with the same machine at the State Fairs in Ohio, Michigan and Pennsylvania, and also at the Provincial Fair in Upper Canada, at all of which we received the highest premium, viz: In Ohio, a Silver Medal and Diploma; in Michigan, $20; in Pennsylvania, $10; and in Canada, a Diploma.

We have numerous similar testimonials from county Societies, where we have always received the highest premiums awarded to Chain Powers.

Price of One Horse Power, Thresher, Separator, and Belting,.. [illegible]

Two Horse do.,.. [illegible]

Price of Double Power, Thresher, and Winnower, .. [illegible]

From R. Olney, of Portage, N. Y.

"MESSRS. WHEELER, MELICK, & Co.—I will now give some facts in regard to your Thresher and Winnower. I first used it to thresh oats, which were good and [illegible] long straw. With five hands we threshed and cleaned it for any market, 60 bushels per hour while running. This is not guess work, as is frequently the case, but we kept the time to the minutes, and much larger figures might have been made had we exerted ourselves. Our wheat was *heavy growth and very long straw.* We averaged [illegible] 25 bushels an hour, using a pair of mules and a span of very light horses alternately; but with either team and five hands, I can thresh 400 bushels good oats a day, and half that quantity of wheat, and make it no harder for team or hands than ordinary farm work. The machine is admirably adapted to the farmer's use; can be worked at so little expense and in bad weather when little else can be done. It is of the most simple and durable construction, there being nothing liable to break or soon wear out, that a common farmer can repair. It cleans the grain well, and wastes less than any other I ever examined. I write thus minutely that you may understand the facts as they are, the figures I have given being taken from our ordinary threshing without any effort to hurry business."

From Samuel Tucker, of North Evans, N. Y.

"MESSRS. WHEELER, MELICK, & Co.—In reply to your request about the Thresher and Winnower, I am ready to answer that it works well. Indeed its equal was never seen in Erie county. I have threshed 13,794 bushels of wheat, oats, and barley, besides 50 bushels grass seed. A number of my neighbors want machines like mine."

The subscribers have the exclusive sale of these machines in Rochester, and the general agency for Western New York. We sell at the manufacturers' prices, adding transportation.

J. RAPALJE & CO.

63 and 65 Buffalo street, Rochester, N. Y.

TWO AND A HALF MILES NORTH FROM NEWBURGH FERRY.

THE subscriber respectfully solicits the attention of fruit growers and dealers in fruit trees, to his large stock, for sale this fall, consisting of

40,000 Apple Trees, of the most approved varieties, 6 to 10 feet high, at from $12 to $14 per hundred.

20,000 Pear Trees, embracing all the varieties in general cultivation, 5 to 8 feet high, 30 cts. each, $28 per hundred, on pear stocks. On quince the trees are very thrifty, and include, in addition to the leading standard sorts, many of the new varieties of recent introduction, which promise well.

30,000 Cherry Trees, two to three years old, of nearly all the popular kinds in cultivation:—Dwarfs, on Mahaleb stocks, of the choicest varieties, can also be supplied, 6 to 12 feet high, $20 to $22 per hundred.

20,000 Plum Trees, of the most highly esteemed sorts, $30 per hundred. Trees thrifty, pretty, and of fine size.

A large stock of Apricot, mostly on Plum stocks, at $30 on plum, $12½ on peach, per hundred.

30,000 Peach Trees, of the most valuable standard varieties, one to two years' growth on the inoculation, 7 cents each, $6 per hundred. No peach pits are planted but from a district where the "Yellows" has not yet made its appearance.

The Stock of Isabella and Catawba Grape Vines is very large, two to four years old, with fine roots; having been annually cut back, they are in fine condition for vineyard planting. $10 to $15 per hundred.

2,000 Quince Trees, mostly of the Apple variety; Currant and Raspberry bushes, Strawberry plants, Hybrid Perpetual and other Roses, &c.

40,000 Deciduous and Evergreen Ornamental Trees, suitable for lawns and avenues, many of which are of large size and fine form—among which are 10,000 Arbor vitæ, ½ to 5 feet high, $12 to $25 per hundred. (Not from the State of Maine.)

18,000 Balsam Fir, ½ to 5 feet high, at from $15 to $30 per hundred—together with Norway Spruce, Native Spruce, Scotch, Austrian, and Weymouth Pines, Junipers, Deodar Cedar, Cedar of Lebanon, English and Irish Yew, &c.

5,000 Red Cedars, of suitable size for screens.

10,000 Buckthorn, two years old, $6 to $8 per thousand.

The most highly prized varieties of the Apple, Peach, Pear, Plum, Apricot, Cherry, &c., which have recently originated in this country and Europe, have been procured as early as practicable, and tested, or are in the course of being tested, on the grounds of the proprietor. The new and rare Deciduous and Evergreen Ornamental Trees are annually imported, of which fine plants can be furnished. 4,000 seedling Oaks and Elms, imported four years since, are among the Deciduous Trees, many of them very remarkable in their growth and appearance.

The Nursery is located within 2½ miles of the Hudson River Railroad Depot, at Fishkill Landing. Steamboats run daily to New York and Albany, from Newburgh.

Trees, &c., when ordered, will be taken up carefully, correctly labelled, packed in the best manner, forwarded agreeable to order, and with the least possible delay. Charge for packing made only to cover cost.

Catalogues sent in exchange for a letter stamp.

DANIEL BRINCKERHOFF.

Fishkill Landing, October, 1852.—*4

For Sale.

ONE of the desirable farms in the Chenango Valley, situated two miles from the village of Oxford, containg 220 acres, river flat—grain land, pasture, wood land, and orcharding. A large and convenient dwelling house, two large barns, with sheds and out-houses. Watered by the Chenango river, a creek, (on which is a saw-mill,) and by never-failing springs. On it are more than seven hundred rods of stone wall. Persons wishing to purchase, are desired to look at the crops and stock on the farm. Inquire of

JOHN TRACY,
Oxford, N. Y.

Oct., 1852.—10-2t*

King's Floral Garden and Nursery.

THE proprietor offers for sale, this fall and the coming spring, at his Nursery and Flower Garden, Mount Hope avenue, Rochester, a large and choice variety of Fruit and Ornamental Trees, Shrubs, Vines, Roses, Herbaceous Plants, Bulbous Roots, Greenhouse, Border, and Bedding Plants, Double Dahlias, &c., wholesale and retail.

A few thousand apple stocks, Norway Spruce and Balsam Fir seedlings, Red and White Cedar. The trees are of large size and thrifty growth, and will be sold cheap for cash.

WM. KING.

BOTANIC GARDENS & NURSERIES,

FLUSHING, (LONG ISLAND,) N. Y.

WM. R. PRINCE & CO. desire to sell off by the first of May next, the entire collection of Trees and Shrubbery from 50 acres of their Nurseries, and the Green-house Plants, the ground being wanted for building lots. The trees are equal to any ever grown, and comprise the choicest varieties, and sales amounting to $250 and upwards will be made at 12 months credit for approved security.

The stock of Pears on pear and quince, and of dwarf and standard Cherries, Apples, Plums, Peaches, Grapes, Quinces, and other fruits, is unrivalled in extent and in vigor of growth, and among them are 15,000 Fruit Trees of large bearing size.

50,000 Evergreens of every species and size, and other Ornamental Trees of every size.

3,000 finest Foreign Grapes, in pots, for grape-houses, and 15 superior vareities of hardy Native Grapes.

The collection of Strawberries is the finest in the Union, comprising many varieties not obtainable elsewhere, and all described in the catalogue.

Five best species of European Osiers.

A great stock of Camelias, Chinese Azaleas, and other Green-house Plants.

An immense assortment of Bulbous Flower Roots and Pœonies, and the finest collection of Strawberries.

New Nurseries and Cemeteries can buy to great advantage.

Note.—This is the proper period for transplanting Strawberries, Bulbous Roots, Pœonies, Rhubarb, Asparagus, Sea Kale, &c.

Descriptive catalogues sent to all applicants who send stamps, and a wholesale catalogue for nurseries.

Oct., 1852.—10-1t*2.

Clarke's Excelsior Churn,

OF various forms and sizes, will be furnished to dairymen, throughout the United States, at prices ranging from $2.50 to $10. The sizes generally preferred, with iron axles, crank, and gearing, will be delivered at Utica, for Canal or Railroad, at $7 and $10 each. No extra charge is made for the perfect tempering apparatus which goes with every Excelsior Churn. Three or more thirty gallon milk churns in one frame, for horse power, are offered at about $5 per cylinder. Orders from distant places should enclose payment. Agents wanted to sell state and county rights. Circulars giving full information, terms to agent, &c., will be sent gratuitously to all who apply at any time post-paid, to the proprietor

GEO. B. CLARKE,
Leonardsville, Madison Co., N. Y.

The following is one of the many testimonials of its value:

"Sangerfield, Oneida Co., N. Y., July 25, 1852.

"Geo. B. Clarke—Sir: The Excelsior Churn now in use in my dairy, does the work in a superior manner, and is just the article to make good butter. I do not care to churn less cream than will produce twenty pounds of butter at a time, which I usually do in from ten to twenty minutes. It is my opinion that your Excelsior Churn has no rival in point of excellence.

Hezekiah S. Green.

Virginia Farms.

THE advertiser offers for sale a plantation of 390 acres in an excellent neighborhood, three to four hours ride from the capital of the State, one mile of railroad, mostly in original growth. Good house with five rooms, out kitchen, &c. Well watered by creeks and never-failing springs. Well adapted for wheat, corn, and oats. A portion valuable low grounds, actually worth $50 per acre. Healthy as any part of the world. Enough wood may be sold from the place to pay for it. Lowest price—$1,600 cash; or $1,000 cash, and interest on the balance.

Also, a place of 1400 acres, thirty miles from the city of Petersburgh, three miles from railroad depot. 500 acres valuable timber, that would fully pay for the place. Suitable for division. Good buildings. A truly valuable plantation. Fine neighborhood. $5 per acre. 2,000 acres may be bought adjoining.

Also a tract of 150 acres, directly on a railroad, 18 miles from the city. $4 per acre—cheap as dirt.

Also, a tract of 458 acres, four miles from the city of Petersburgh, with plenty of marl, buildings somewhat out of repair. $7 per acre.

The above plantations are well worth the attention of northern farmers, and will be sold for the prices stated, and no less. Cash, or part cash and interest added. Address

J. CLARKE, Jr.,
Proctor's Creek, Chesterfield Co., Va.

10-1t*2

FRUIT AND ORNAMENTAL TREES.

ELLWANGER & BARRY desire to call the attention of nurserymen, dealers, and planters, to the immense stock of trees now on their grounds, embracing Fruit Trees of every description, viz:

Standard Apples, Pears, Plums, Cherries, Peaches, &c., on free stocks, for orchards, vigorous and well formed.

Dwarf and Pyramidal Pear Trees, on quince stocks. About 100,000, embracing every fine variety that can be so worked, two year old trees, low branched, vigorous and beautiful.

Dwarf and Pyramidal Cherries, on Mahaleb stocks. Fine one, two, and three years old trees, well branched and finely formed.

Dwarf Apple Trees, on Paradise and Doucain stocks. Beautiful two year old trees, with heads, for immediate bearing—besides vigorous yearlings.

Gooseberries.—Large Lancashire sorts. Strong plants for immediate bearing.

Currants.—Including the *Cherry*, *Victoria*, *White Grape*, and many other new and fine sorts. See our catalogue.

Raspberries.—The new *Large fruited Monthly*, *Fastolff*, *&c.*, *&c.* A complete collection of all desirable varieties.

Grapes.—Hardy, native sorts—*Isabella*, *Catawba*, *Clinton*, *&c.*—strong two and three year old vines. Thirty varieties of Foreign Grapes, for vineries—strong, thrifty plants, in pots.

Strawberries of all desirable varieties, and all other fruits cultivated.

Rhubarb.—Genuine *Myatt's Victoria*, *Myatt's Linnæus*, *Mitchell's Royal Albert*, *Downing's Colossal*, and hybrids of the above, of our own raising from seed, quite equal to any of them.

The entire fruit department is under our own personal supervision. The best quality of stocks is used, and the most scrupulous attention given to ensure accuracy. We flatter ourselves that no nursery collection can offer a stronger guarantee to purchasers, in this respect. The stock is all grown on new, fresh soil, and is healthy, well matured, and hardy. We ask purchasers to examine it.

Ornamental.—Large trees, for streets, parks, &c., such as *Horse Chestnuts*, *Silver Maples*, *Sugar Maples*, *Snowy Abeles*, *Mountain Ash*, *Elms*, and *Tulip Trees*, in large quantities, cheap.

Rare Ornamental Lawn Trees—embracing the most novel, remarkable, and beautiful trees and shrubs, both deciduous and evergreen, that can be grown in our climate. For particulars we must refer to the descriptive catalogue.

Roses.—One of the richest collections in the country, including the newest and best European varieties, selected by us in person, last summer.

Bulbous Roots—imported annually from Holland.

Dahlias.—The new English and French prize sorts of 1851, besides fine older ones.

All articles packed in the best manner, and forwarded to any part of the United States, Canada, or California.

Orders strictly complied with in every particular.

The following catalogues are sent *gratis* to all who apply and enclose stamps to cover postage, which must be prepaid:

No. 1. A Descriptive Catalogue of Fruits.

No. 2. A Descriptive Catalogue of Ornamental Trees, Shrubs, &c.

No. 3. A Catalogue of Dahlias, Fuchsias, Chrysanthemums, and bedding plants.

No. 4. A Wholesale Catalogue, for nurserymen and others who wish to purchase largely.

Postage on Nos. 1 and 2—500 miles or under, 3 cts.; 500 to 1500 miles, 6 cts. Postage on Nos. 3 and 4—500 miles or under, 1 cent; 500 to 1500 miles, 2 cts.

Mount Hope Nurseries, Rochester, N. Y., Sept., 1852.

Emery & Co.'s Improved Horse Powers, Threshers, and Seperators.

THE undersigned have been appointed sole agents for the sale of Emery's new Patent Improved Horse-Powers, Threshers, and Separators, in the city of New York. The State Agricultural Warehouse is the only depot where this superior Power can be had.

LONGETT & GRIFFING,
7-tf. State Ag. Warehouse, 25 Cliff st., New York.

Seigner & Shipton's Grain Drill.

THIS is a new Drill, recently patented, combining more good qualities than any other drill now in use. These drills are manufactured and sold by J. RAPALJE & CO., Genesee Seed Store and Agricultural Warehouse, Nos. 63 and 65 Buffalo street, Rochester, N. Y.

SYRACUSE NURSERIES.

THORP, SMITH, HANCHETT, & CO., PROPRIETORS.
SYRACUSE, N. Y.

OUR nursery grounds, among the largest and most extensive in the country, are now covered with a most beautiful stock of Fruit and Ornamental Trees, Shrubbery, Roses, Green-house Plants, &c. We therefore invite particular attention to our stock of trees, which can not be excelled in size, thriftiness, and beauty, by those of any other establishment in the Union. Nurserymen, Amateurs, Orchardists, and Venders, are earnestly invited to call, examine, and judge for themselves.

Apples.—We have a very extensive assortment of all the very best varieties in cultivation, both Dwarf and Standard.

Pears.—Our stock of Standards and Dwarfs is much better than heretofore; and we invite competition, as none finer can be produced. We have also a few dwarfs five years old, filled with fruit spurs, and which have borne freely the past two years. (and now with a full crop,) that we will supply to those persons desiring fine fruit-bearing trees.

Cherries—Both Standard ahd Dwarf, of all the newest and finest sorts, which can not be excelled for beauty and thriftiness.

Plums, Peaches, Apricots, Nectarines, Currants, (including the *Victoria* and *Cherry*,) and English Gooseberries, of all the best leading sorts.

Our Ornamental Trees are of fine form and luxuriant growth, and require only to be seen to be admired.

Evergreens.—A fine assortment of *Norway* and *Balsam Firs*, *Spruces*, *&c.*

Pæonies.—A splendid assortment of both tree and herbaceous varieties.

Dahlias.—Over 150 choice selected kinds, at 25 cents for whole roots.

Roses.—One of the largest stocks in the country, of all the leading varieties, being about 10,000 plants.

Bulbous Roots.—A splendid assortment, just imported from Holland, of best double *Hyacinths*, *Tulips*, *Crocus*, *&c.*, *&c.*

Green-House Plants.—A large collection of the choicest and newest kinds, including the new *Heliotropes Reptans*, *&c.*, *Lantana Ewingii*, *Hoyas*, *Imperialis*, *Bella*, *Bidwelliana*, *&c.*

Fuchsias in 50 varieties, including *Spectabilis*, *Eliza Millies*, *Sir John Fastolf*, *Serratifolia*, *Prince of Orange*, *Carolina*, *Pearl of England*, *&c.*

Chrysanthemums.—A full assortment of all the best standard kinds in the country. Of the *New Dwarf and Daisy* varieties we have everything new and rare, including 30 of the very best sorts.

Verbenas.—A splendid collection of 50 varieties, including *Hovey's New Seedlings*.

Strawberries.—All the best varieties, including the 3 new Cincinnati sorts, one of which took the $100 premium.

Hedge Plants.—*Buck Thorn*, *Privet*, *Red Cedar*, and *Osage Orange*.

Seedling Stocks.—Nurserymen and others can be supplied with Apple, Pear, French Quince, Mahaleb, Doucain, and Paradise stocks, by giving us notice in due time.

Our Catalogues, with full descriptions and prices, will be forwarded to every post-paid applicant enclosing one letter stamp, if under 500 miles, and three stamps if over that distance.—9-2t. THORP, SMITH, HANCHETT, & CO.

FRUIT & ORNAMENTAL TREES.

RIVER BANK NURSERY, ROCHESTER, N. Y.

Sheppard & Cherry, Proprietors,

NOW offer to furnish nursery stock generally, of as good quality, and at as low rates, as can be obtained elsewhere.

Fruits of all the leading varieties, both standard and dwarf, of Apples, Cherry, Peach, Pear, Plum, &c., &c. Gooseberries, Currants, Raspberries, Strawberries, &c. Grapes—*Isabella*, *Catawba*, *Clinton*, *&c.*

Also 100,000 apple stocks, for root grafting. 20,000 Cherry stocks, root pruned.

All orders accompanied with cash or satisfactory reference, and all letters of inquiry post-paid, will receive prompt attention.

From the connection of Mr. Sheppard for a number of years with the following establishments, all of which sustain the highest reputation, viz: A. J. Downing and A. Saul, Newburgh, N. Y.; Wm. Reid, Elizabethtown, N. J.; and Ellwanger & Barry, Rochester, N. Y.; the proprietors flatter themselves that their knowledge of the great variety of tastes ahd wants of planters generally, will enable them to guarantee ample satisfaction to all favoring them with their patronage.—9-2t.

C. J. RYAN & CO.,

PROPRIETORS OF THE ROCHESTER AND CHARLOTTE PLANK-ROAD NURSERIES,

Rochester, N. Y.,

OFFER for sale, as follows, at moderate prices:

10,000 Apple trees, from five to eight feet high, four years old. All the principal early and late sorts. Also, Pear, Peach, Plum, and Cherry trees—all thrifty and in good order for transplanting.
20,000 Raspberries, including all the popular market varieties.
5,000 Isabella Grape vines, three years old, propagated from cuttings, not from layers—will bear fruit at once.
1,500 Apricot trees—large and thrifty—full of fruit buds.
50,000 Cherry seedlings, (Black Mazzard,) in fine order. They will all bud next year.
25 distinct varieties of Strawberries, among them the principal productive and high flavored sorts.
10,000 Rhubarb Roots. Downing's Collossal, Giant, and Myatt's Victoria.
100,000 Giant Asparagus roots, two and three years old.—Every family ought to have a bed of this delicious vegetable of the easiest culture.

Sea Kale and Horse Radish.

Hedge Plants, such as Privet, Osage Orange, and Buckthorn, one and two years old.

Our Ornamental trees are straight and handsome. All the most desirable varieties under cultivation.

Shrubs, Running and Shrubby Roses, Ornamental Vines, &c., &c., cultivated largely, and will be sold low.

☞ Our nursery land is principally a mellow, sandy loam, which furnishes our trees with tufts of fibres, and gives them a decided advantage over trees cultivated in stiff clay or wet land, which generally produces long, bare roots, without fibres.

All orders addressed to us, as above, will be promptly attended to.

See our General Descriptive and Annual Catalogues, which will be sent gratis to all post paid applicants.

☞ The extensive pear, peach, cherry, and apple orchards connected with these nurseries, give them facilities which are seldom equalled in the propagation of nursery stock. All our scions and buds are cut from bearing trees; and if there is a possibility of having fruit trees accurate to name and description, we have every facility for doing so.

September, 1852.—9-2t.

Hallock's Agricultural Warehouse,

No. 50. STATE ST., ROCHESTER, N. Y.

THE Subscriber, late from the Agricultural Works, Warehouse, and Seed Store of Messrs. Emery & Co., Albany, (where he has been engaged for the past six years,) has been induced to establish an Agency for the sale of their justly celebrated Premium Horse Powers, Threshers, Separators, &c., in Rochester. Particular attention will be paid to selling and putting up the Horse Powers, and other fixtures for threshing, &c. A thorough knowledge of these machines enables him to put them up more satisfactorily than has been done heretofore. Price and terms same as at Albany, transportation added.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in Rochester, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public.

E. D. HALLOCK.

July, 1852.

Northern N. Y. Live Stock Insurance Company, Plattsburgh, N. Y. For terms, please apply to agents of the Company.

Great Sale of Superior Thorough-bred Short-Horn Cattle.

THE subscriber will offer for sale his entire herd of choice Short-Horns, comprising 50 head, young and old, at public auction, on Wednesday, the 13th of October, 1852, at 1 o'clock P. M., at his farm, 2½ miles from the city of Troy; reserving to himself one bid on 5 cows and heifers and one bull, say six head in all, and these to be pointed out previous to the commencement of the sale. This bid will be made public when the six animals are brought to the stand for sale. Should any gentlemen advance on the single bid made by the proprietor, the highest bidder will be entitled to the animal. It is proper to say, the severe drouth in this vicinity reducing the hay crop one half, has decided the proprietor to make this sale at the time named, instead of next June, which he had purposed to do.

The well established reputation of this herd in this Union, and in Canada, and the splendid herd it has measurably sprung from, viz: the famed herd of that eminent English breeder, the late Thomas Bates, Esq., renders it hardly necessary to comment upon its superior merits. It may not however be inappropriate to remark, that the establishment of this herd was commenced in 1838, and that the most careful attention has since been paid to its breeding, and that it now contains mostly all the reserved stock of two former public sales. Since 1840, the proprietor has imported from the late Mr. Bates, and his friends and late tenants the Messrs. Bell's, 7 head of Short-Horns. And besides these, he has now on the passage across the Atlantic, shipped 21st June, on board the packet ship Kossuth, Capt. Jas. B. Bell, a superior yearling roan bull, having many crosses of the famed Duchess bulls of Mr. Bates. Including this latter animal and the two beautiful red roan 3 year old heifers which came out from England last September, "Yarm Lass" and "Yorkshire Countess" and the beautiful heifer calf of the latter animal, got in England by the Duchess bull "5th Duke of York," there will be 14 head of this imported stock, and its immediate descendents. There has been sold from this herd but 3 heifers from these importations, and these cows were sold at $800 each. All the young bulls bred from these cows, except those now offered for sale, have also been sold at private sale, at $300 each, most of them while quite young.

Besides these 14 head of high bred animals, the noble premium cow "Esterville 3d," bred by E. P. Prentice, Esq., of Albany, and her equally fine 2 year old, red and white heifer bred by me, got by the Bates bull "Meteor," and 3 of the famed milking Willey tribe, the same tribe of cows as the heifer "Ruby," sold by me to Mr. S. P. Chapman, of Madison county, and which cow was awarded the first premium by the N. Y. State Ag. Society, [illegible] producing the largest quantity of butter in ten days in [illegible]ne and ten days in August, on grass pasture only, being a fraction over 40 lbs. in those 20 days. There are other valuable tribes in the herd, as the printed catalogue will show.

The catalogue will be ready for distribution about the 1st of August, and will exhibit richness of pedigrees rarely to be met with, showing the descent of the most of the animals from the best animals on record in the English herd book. Having received an invitation from H. Strafford, last winter, to forward a list of the pedigrees of my herd, to be inserted in the forthcoming volumes of the English herd book of which Mr. Strafford is now the editor, several pedigrees were sent to him of the animals here offered for sale, and will appear in said book. Gentlemen are invited to examine the herd at any time.

A credit of 9 months will be given on all sums up to $800, and 9 and 18 months on all sums over $800, for approved paper, with interest, payable at some bank in this State.

Troy, N. Y., August, 1852.—8-3t. GEO. VAIL.

Prices of Manures.

Peruvian Guano, 2¼ to 2½ cts. per lb.

Improved Superphosphate of Lime, (Mapes,) 2½ cts. per pound.

Superphosphate of Lime, (Extra No. 1, Duburgh's,) 2½ cts. per lb.

Bone dust, when taken in equal quantities, $2.25 per bbl.

Bone sawings, separately, $2,50 per bbl.

Wood's Renovating Salts, 1 cent per lb.

Sugar-House Bone Black, $8 per hhd.

Potash, 3½ to 4 cts. per lb.

Charcoal, pulverized, $1 per bbl.

Sulphuric acid, 2¼ to 2½ cts. per lb.

Plaster of Paris, $1 to $1.25 per bbl.

For sale at the State Agricultural Warehouse, No. 25 Cliff street, New York. LONGETT & GRIFFING.

September, 1852.—9-2t.

Prices of Agricultural Products at the Principal Markets in the United States. —Sept. 20, 1852.

	New York.	Boston.	Rochester.	Chicago.	Cincinnati.	Philadelphia.
Beef, per 100 lbs....	$7.00 a 9.00	a $7.25	$5.50 a 6.00	$6.00 a 6.50		
do mess, per bbl..	12.00 16.00	15.00 17.00	10.00 10.50	8.00 10.00		$18.00 a 19.00
Pork, per 100 lbs....			7.00 7.50	5.00		
do mess, per bbl.	19.00 19.12½	20.00 21.00	16.00 19.00	17.00 19.00	$19.25 19.50	19.75 20.00
Lard, per lb.........	11½	12 13	9 10	9 10	10 a 11½	11½ 12½
Butter, do	14½ 22½	16 21	16 18	10 12½	11 16	12 14
Cheese, do	6 6¾	4 7	6 7	5 6	6 6½	
Flour, per bbl......	4.25 5.75	4.12 5.75	4.50 4.75	3.50 4.25	3.50 3.60	4.50 4.87½
Wheat, per bush....	90 1.11	90 1.05	96 98	45 55	57 60	95 1.06
Corn, shelled, per bu.	70 72	70 74	54 56	46 48½	40 42	70½
Rye, do	86	78 80	56 62		48 58	74
Oats, do	43	46 47	34 37	26 28	23 25	34 37
Barley, do	74 78		67 70		40 50	
Clover seed, do	8a8½ pr. lb.	8 a 11 per lb.	5.50		4.00 5.00	4.75 5.00
Timothy seed, do	$18 to 20 per tce.	3.00 3.25	2.50 2.63	2.25	1.75 2.00	2.75 3.25
Flax seed, do	1.45 1.50	1.38 1.50	1.25 1.50	1.00	90	
Hay, per ton........	20.00 25.00	20.00 21.00	11.00 18.00		5.00 10.50	
Wool, per lb........	35 52	40 50	30 40	23 36	28 45	37½ 60
Wood, hard, per cord		5.00 6.00	4.00 4.50	4.00		

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D. M. DEWEY,
Oct., 1852. Arcade Hall, Rochester, N. Y.

Charles Moulson

OFFERS for sale at his nursery on North Union street, a large stock of Fruit Trees, consisting of Apples, Pears, Plums, Cherries, Peaches, and Apricots, of the most desirable varieties.

Currants, Gooseberries, Strawberries, and Grapes, of various kinds.

Also, a fine assortment of dwarf pears.

20,000 seedling apples, for stocks.

Rochester, October, 1852.—10-1t*

S. MOULSON.
OLD ROCHESTER NURSERY.
OFFICE, 36 FRONT STREET, ROCHESTER, N. Y.

20,000 Northern Spy apple trees, 6 to 8 feet high, (*transplanted*,) at 37½ cents each, or $25 per hundred.

50,000 most popular varieties of apple, at 25 cents each, or $18 per hundred.

1,000 dwarf apple, at 37½ cents each.

60,000 dwarf pear, at 50 cents each.

20,000 standard pear, at 50 cents each.

20,000 standard and dwarf cherry, at 50 cents each.

10,000 Giant rhubarb, at 25 cents each. $2 per dozen, or $60 per thousand. Best sort for market gardeners.

Also, a large assortment of apricot, peach, nectarine, strawberries, various sorts of nuts, &c., &c.

50,000 Osage Orange, for hedges, at $10 per thousand, or $6 for five hundred. Hedge plants in great variety.

50,000 Norway Spruce, two years old, at $5 per hundred.
20,000 " three " at $10 to $12 "

20,000 Mountain Ash, two years old seedlings, at $20 per thousand, or $12 for 500.

Bulbous flower roots of various sorts, together with a large assortment of various hardy items, comprising everything requisite for open ground culture in this climate.

Lists of leading items forwarded to post paid applicants enclosing a one cent postage stamp for under 500 miles, and two for over. Packing done in the best manner. Orders solicited, by mail or otherwise.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,
A MONTHLY JOURNAL OF
AGRICULTURE AND HORTICULTURE,
ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF
Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIII, FOR 1852.

DANIEL LEE & JAMES VICK, JR., EDITORS.
P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

Five Copies for $2—Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

Subscription money, if properly enclosed, may be sent (post-paid or free) at the risk of the Publisher. Address to

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December, 1851. *Rochester, N. Y.*

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STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.

VOL. XIII. ROCHESTER, N. Y., NOVEMBER, 1852. No. XI.

THE FUTURE OF THE GENESEE FARMER.

ONE more number completes the present volume of the *Genesee Farmer*, and ends our labors for the year 1852. We have spared neither labor nor expense to make the monthly visits of our journal interesting and profitable to our numerous readers. Grateful to its numerous friends for the unparalleled favor with which it has been everywhere received, our devotion to their best interests shall prove how sincerely we thank them, and appreciate all their kindness. We never had any private business to promote by writing for the agricultural press, either north, south, or at the federal metropolis; and therefore we may say with equal truth and sincerity, that the interests of our readers are our interests; and that we desire no other.

Agriculture and Horticulture are great and enduring interests; they are susceptible of large and indefinite improvement. To effect this, we have sought to unite the advocates of agricultural progress in all the States into one national body, that something may be done in our lifetime in behalf of agricultural text-books, experimental farms, schools, and rural science, worthy of a republic in which farmers constitute the ruling majority. But every step we have taken that appeared likely to improve anything, has encountered opposition from the ignorant, the selfish, and the prejudiced. If public opinion be not yet ripe to sustain a national agricultural Society, nor one experimental farm, agricultural or horticultural school in America, the fault is not ours; nor shall we abate our humble efforts to bring public opinion up to that degree of enlightenment which will regard the science of agriculture as not less worthy of colleges, museums, professional libraries, laboratories, and lecture rooms, than the science of medicine.

In a field so broad as the United States, it is not always easy to determine at what point one's services will be most useful to an interest that employs over five thousand million dollars capital, and labor in proportion. Such an interest demands a very comprehensive and perfect organization, having its head at Washington, and its working associates in every State and Territory in the Union, for the collection and diffusion of useful knowledge. Our sympathies are with all sincere and active friends of improvement, no matter where they reside; and we can not but believe that these noble spirits will ere long co-operate most effectively in all the States, to increase the learning, cultivate the taste, improve the practice, and enlarge the views and science of American farmers. As a medium of communication between those who believe in rural instruction, and desire to improve, the *Genesee Farmer* offers many and peculiar advantages. It is published in a farming region sufficiently advanced to sustain an agricultural journal years before the *Albany Cultivator* was started, at twenty-five cents per annum. In successful agriculture, horticulture, and nurseries, Western New York has attained a degree of maturity and excellence which we have sought in vain elsewhere on this continent. Our cheap periodical is a *help* to other agricultural papers, not a competitor. They have started into existence after it. This pioneer publication, and its patrons of a quarter of a century, have created a demand for agricultural reading, and a score of new journals are profiting by it. We wish them all success; for there are still hundreds of thousands, nay millions, that read no similar work, and affect to despise all book knowledge.

Whatever discoveries are made in rural arts and sciences in Europe or this country, will be sure to receive an early notice in this journal. Congress has printed and ordered printed three hundred and ninety thousand volumes of the agricultural books prepared by the writer in the Patent Office; and we have given in the *Journal of the United States Agricultural Society*, many months in advance of Government, the agricultural statistics of every State and Territory, as taken at the last census, and corrected at the Census Office down to July 22d of this year. These official tables will be found in the present number of the *Farmer*. If each subscriber, in ordering this paper for 1853, will induce his friends and neighbors to add their names to our list, both they and the editor will be benefitted, as well as the farming community.

So far as time and ability will permit, we shall be happy to answer all inquiries that our readers may please to make, without charge; as we shall be thankful for every item of knowledge either in husbandry or horticulture, adapted to the character of this paper, and not already sufficiently known.

Now is the time to subscribe for the coming year; for our terms are strictly pay in advance; the profits being only a few cents on each volume of the work.

◆

WHEAT CULTURE.

After noticing the unprecedented drouth that has prevailed in central Illinois the past season, Mr. A. Stevens, of Peoria, says: "I have read your articles on the culture of wheat, with great satisfaction; and I hope that you will continue the subject until the raising of that grain, though not a new business, shall be better understood by *western* farmers at least, than it ever has been even by the most practical and intelligent of them."

The two most common defects in wheat culture at the west, are the use of impure seed, or sowing clean seed on foul land, and a total disregard of the essential elements of the crop, which ought to abound in the soil to secure a profitable harvest. As a question of economy, the annual loss that accrues from the use of bad seed, and the propagation of pestiferous plants and weeds, should be pondered, not only by every wheat-grower, but by every other person who cultivates so much as a rood of land. Carelessness in this regard is a distinguishing feature in American tillage, whether on a wheat farm of a thousand arable acres, or in a small village garden. Some of our New York, New England, and Pennsylvania readers, will regard this remark too severe; but their better system of farming is only an exception to the general rule, which may be seen in all its deformity in the western, southern, and middle States. It is rare indeed that one meets with a field of wheat in Virginia or Maryland that is entirely free from garlic, the seeds of which damage the crop from five to twenty per cent. of its value. A volume might be written on the injury done by weeds, and the best means of extirpating them, without exhausting the subject. Clean land and pure seed are elements of profit in wheat culture, and agriculture generally, that we can not too often nor too earnestly commend to the attention of our readers. But neither clean land, nor pure seed, nor deep and thorough tillage, will long make wheat-growing profitable on the same fields, unless the raw material consumed and wasted in the processes carried on study the elements of fertility in their soils; investigate the chemical changes wrought in the surface of the earth by the operations of plowing, harrowing, and hoeing; and consider the food of their living, growing crops, as actually consumed; compels us to view with some alarm the agriculture of the country. Our present system often takes one hundred times more of the precious atoms that form wheat and corn, tobacco and cotton, out of the surface of the earth, than is restored to it again. But our western friends will not now consider the damage that may be done to their newly improved farms; and therefore we need not waste time in writing, nor room in our journal, by urging them to husband ammonia, bone-earth, potash, soda, chlorine, magnesia, and gypsum, as the ingredients which nature has stored up in their virgin soils, not to be wasted by the two or three first generations that may chance to till them. Conceding what is not true, that wheat-growers have a moral right to exhaust the land of its elements of bread and meat, for exportation, we tell them that the free use of lime will render the natural resources of arated land more available to wheat plants. On all fields in which calcareous matter does not abound, and the phosphates and sulphates of iron and alumina do, lime may be used with decided advantage. In such cases, lime abstracts both phosphoric and sulphuric acids from iron or alumina, forming the phosphate of lime and gypsum, both of which improve the soil. To keep up the fertility of wheat farms, no practice has been so successful as the culture of clover, peas, corn, roots, and grass, in rotation with wheat; taking care to return in manure, or green herbage, the elements contained in these renovating crops.

Too much wheat is grown in the United States, and the price of this great staple is too low for the public good. Millions of bushels are raised every year, and sold for a sum of money that will no more than purchase, in any market, the raw material consumed and lost in making the grain. The business would be universally abandoned at present prices, but for the fact that the intrinsic value of the things in the land, which contribute so largely to form the harvest, is rarely estimated by the husbandman. To prevent the slow but unceasing impoverishment of the soil, more manure must be made and what is made must be better husbanded, and used with greater skill. No arbitrary rules can be given that will apply to all climates, and all conditions of land; but much must be left to the sound judgment of the cultivator after he has been taught the true principles of his profession. Wool-growing and meat-making may be associated with wheat-culture with decided advantage. In producing a needful supply of manure, by the consumption of grass, hay, coarse grains, roots, and oilcake, so necessary to enrich all tilled land, the farmer may realize a fair income from his sheep. In short, our western friends should combine legitimate husbandry, *i. e.*, stock-raising and wool-growing with tillage, or agriculture proper.

Nor should the hidden resources of the subsoil be forgotten in this brief survey of the art of producing wheat at a profit. If the elements of bread which a good Providence has placed in the subsoil are to be dug out over millions of acres, and sent by railways canals, rivers, lakes, and the ocean, to distant cities, and there *wasted*, we prefer to say nothing of deeper plowing — nothing that will compel the next generation to give twice as much hard work for a bushel of wheat or corn as the people of Illinois now give Posterity has done us no harm; and we will never knowingly aid in the unjust work of desolating one cultivated field from which those that are to come after us may wish to draw their indispensable food and raiment. They shall have the arable lands of all the grain and cotton-growing States of this Republic as rich in every respect as God made them, so far as our humble pen and tongue can secure that consummation.

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THE WANTS OF SOCIAL AND DOMESTIC LIFE.

In the eagerness of our pursuit of the almighty dollar, how prone we are to forget the wants, and neglect the duties of domestic life. How often do we see that peace of mind which money can not buy, and all that wealth is permitted to purchase, thoughtlessly sacrificed to accumulate riches, never to be enjoyed by their nominal owner! Such folly deserves a word of rebuke at our hands, if the social and domestic wants of one or two hundred thousand readers have any claim to our friendly regards.

Of all useful arts and sciences, that Domestic Economy which teaches the wisdom of extracting much happiness from small means, best deserves our study; for it best rewards the practice of the community. Wisdom of this kind makes slow progress, not because a higher standard of social and domestic comfort is unattainable, but from the force of habits, handed down to us from an age of semi-barbarism and extreme poverty. So numerous and important have been the discoveries and inventions during the first half of the present century, that the mass of mankind have yet to learn the proper use of the new treasures placed within their reach. Nor is it an easy task for the head of a family to decide how he can make the most of the property and knowledge that legitimately belong to him. What shall he do? and how shall it be done?

In cities, thousands die of pestilence and other maladies of their own creating, from the neglect of cleanliness, and defective sanitary regulations. In the country, thousands work hard, fare hard, and die poor, not from any necessity, but because the knowledge and social culture which they most need are sadly overlooked and unappreciated. It is the glory of our free institutions, that the poor are rich enough, under wise instruction, with industry and economy, to have of their own, healthy and comfortable homes. Too many, however, make no adequate effort to rise in the scale of humanity; and some words of encouragement, some cordial to their feeble self respect, must be administered before they will begin to labor for their own good. Their domestic wants are in embryo; and the public authorities should see to it, that they are developed aright, securing equal justice and advantages to the physical, moral, social, and intellectual man. Although he, while in his lowest estate, may not know how to unfold the germs of good that his Maker has planted in his constitution; yet, wiser heads than his may successfully cultivate the barren soil within him. The African race has long been regarded as the most stupid of the descendents of Adam. Whether this be so or not, no one now denies that this race is capable of civilization, and indefinite improvement. When viewed in their proper light, the social habits and domestic wants of man are seen to be elements of great power. In skillful hands, these elements will form the basis of a sound public opinion, and prepare the way for the abatement of vice, and crime, and suffering to a degree now little dreamed of in our narrow philosophy.

In society as in geology, there are many strata. We have briefly alluded to the lowest, and proceed to invite attention to those above—to such as have dwellings of their own, but with broken windows, leaky roofs, badly fitting doors, and a scanty supply of fuel for warming them in the winter now close at hand. Shall these domestic matters be attended to, or not? That is the question. Is the reader a good economist? then be assured that discomfort is often more expensive than the full measure of enjoyment in the domestic circle. It is true that no inconsiderable folly is perpetrated under the influence of fashion, and a mistaken notion of what constitutes true taste and sound sense in rural architecture, household furnishing, landscape and farm improvements. A word of caution may not be amiss, to check extravagance, and prevent disasters, in this direction.

Great prosperity is always perilous. Society is already full to over-flowing of pride, conceit, hypocracy, and extravagance. These are the bane of quiet domestic happiness, and the curse of social life. Far be it from us to countenance this quackery of upstart wealth, whose ephemeral brilliancy dazzles but to blind and ruin its votaries. To call into existence in the bosom of a family, far more wants than can reasonably be gratified, is an evil and a wrong of great magnitude. Such improper wants suggest, and ever prompt, improper actions. Engagements are entered into that can not well be fulfilled; and speculations follow of a more reckless character. True social wisdom carefully avoids the temptations that beset the path of virtue. To the spirit of rivalry and ambition there is no limit. If nine-tenths of the community lived in marble palaces, the other tenth might die of disappointment if they failed to erect palaces made of polished ivory, and covered with plates of pure gold. In such a strife, where is the wit, the taste, the science, or the happiness?

We must go back to the simplicity of nature, and the truthfulness of science, if we would elevate and improve society. It can never be done by humbug. The country is overrun with quacks of every degree — quack statesmen and quack philanthropists, quack editors and quack clergymen, quack doctors and quack lawyers, quack authors and quack artists. All these wax fat at the public expense; and quack publishers are beginning to share very liberally in the spoils. It is the artificial wants of the community that sustain all these charlatans; and it is difficult to discover at what point in our social progress the pleasure of being cheated is to stop. A strong love of morbid excitement pervades the very heart of society, and grows on what it feeds. The most trashy and corrupting books make fortunes for the manufacturers and writers; while works of solid merit and of a purifying tendency, find comparatively few purchasers, and starve their authors. These may be unwelcome truths, but they are important truths nevertheless.

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BEAUTY AND VALUE OF FOREST TREES.

"The goodliness of trees when we behold them deliteth the eye."—*Richard Hooker. Born just three hundred years ago.*

No people have more reason than the Americans to admire "the goodliness of trees;" and yet, in no country are they more rudely assailed as the enemies of civilization, and objects worthy of extermination by the ruthless axe and the consuming fire. Such semi-barbarism is discreditable to our national taste, our common sense, and our foresight in other matters of smaller moment. Trees abound in the elements of beauty which may be combined in a thousand pleasing forms. Their culture enables the skillful artist to paint his landscape in living verdure — to present to the eye, open fields and shading groves, wood-crowned hills and sun-lit vales, in charming contrast. Without trees, the world would be a desert; with them, it can be made a paradise. They temper both heat and cold, prevent the injurious dryness of the atmosphere, and greatly promote the fall of genial showers and seasonable rains, in spring, summer, and autumn. For wood, timber, lumber, staves, and a thousand uses, they are almost invaluable.

Forest-culture, considered as a science and an art, is destined to become extremely popular in the United States. The boundless area of fertile lands in this country, the admirable adaptation of its soil and climate to the growth of magnificent trees, and the production of incomparable orchards, and the rich rewards that will recompense the labor and capital devoted to this department of agriculture, can not fail to render it the favorite pursuit of millions.

The season for collecting the seeds of oaks, walnuts, beeches, and chestnuts, is at hand. Some of these, sent to the continent of Europe, and put up under our direction, have preserved their vitality, and are now growing up honored specimens of American forest trees. Extracted from the burr as soon as ripe, none of these seeds should be allowed to become perfectly dry. We box them up in natural earth which is neither dry nor wet. First put in a layer of earth an inch or two in depth, according to the distance the seeds are to be conveyed, and then a layer of acorns, walnuts, chestnuts, beechnuts, or other seeds. This is to be covered with more loose earth, which is to serve as the bed for another layer of nuts; and in this simple manner a box or cask may be filled, and put in order for transportation. Nuts of the tea tree are extremely liable to become rancid and have their germs killed. The buds on the rattoons of sugar-cane used in planting, suffer in a similar manner, as we have seen in the agricultural department of the Patent Office. To preserve the vitality of seeds and buds, is an object of great importance.

Seeds of our native trees are in demand for exportation; and we respectfully commend this whole subject to the attention of our readers. In no other way can they so cheaply embellish their farms, and add to their attractiveness and value, as by improving their woods, groves, and forests, and planting all the choice varieties of American trees on any spare ground not needed for cultivation.

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WINTERING CATTLE AND HORSES.

Owing to the great drouth the past summer, in many parts of the country, winter feed will be exceedingly scarce, and the most rigid economy will be necessary to enable many farmers to carry their ordinary stock through the winter. What is the cheapest method of wintering cattle, sheep, and horses? always an interesting question, becomes now a most important one; and though we by no means pretend arbitrarily to answer it, yet we will endeavor to throw out a few hints that may be useful. We would premise that no particular method can be laid down, that will be applicable to all cases; the climate, locality, nature of the crops grown, and prices obtained for them, interfere with any such calculations. A more serious drawback, however, is the deplorable ignorance of us all on the subject of nutrition; for were the principles of nutrition well understood, it would be easy to alter our modes of feeding to suit circumstances, and so keep the animals in the best and most economical manner.

Different breeds of animals doubtless require different amounts of food; yet, as a general rule, it may be stated that animals require an amount of food in proportion to their weight. That is to say, an animal weighing 1200 lbs. would require twice the food per week as one weighing 600 lbs., other things being equal. More food, too, is required in cold than in temperate weather—more when the animal is worked than when doing nothing. Also, cows giving milk or when in calf, and young animals, require more than an animal of the same weight in a perfectly normal state. If, too, we wish an animal to lay on fat, we must give more food—or rather the same quantity or bulk of food, but of a more nutritious quality—than would be necessary to keep it in a normal condition, or without increasing or decreasing in weight.

The amount of food necessary per week to keep an animal in a normal condition under the most favorable conditions of warmth, is not accurately ascertained. The amount of food, however, which animals eat when given *ad libitum*, depends to a great extent on the per centage of *available non-nitrogenous* substances it contains, and not on the nitrogenous. Thus, an animal fed on oilcake, peas or beans, and clover hay, will eat nearly three times as much nitrogen as when fed with corn meal, hay, &c., though it is probable that the amount of available non-nitrogenous substances eaten, is pretty much the same in either case. The advantage, therefore, in feeding a highly nitrogenous substance, is not in the less amount required by the animal, but in the increased value of the manure and the increased quantity of fat a given amount of non-nitrogenous food will produce, when eaten in conjunction with nitrogenous substances. We are, however, by no means to suppose that the *rate of increase* is in *exact proportion* to the per centage of nitrogen in the food, for it is not; *rapidity* of increase being attained only at an increased proportional consumption of nitrogenous substances.

By *available* non-nitrogenous substances, we mean such substances as sugar, starch, oil, gum, &c., which are readily dissolved in the stomach, and easily assimilated; and not such substances as woody fibre, which, though a non-nitrogenous substance, and composed precisely of the same elements as sugar, &c., is not available as food, being incapable of solution in the stomach, and is passed through the body of the animal unchanged.

In providing our store stock with food, especially in a season of scarcity, our object will be to give them a sufficient amount of available non-nitrogenous substances in the least expensive form. That is, leaving out every other relative question, such as value of manure and increase of animal, and aiming only at keeping the animals in a normal condition without work, we should prefer those foods, the price being the same, which contain the most sugar, starch, &c., supplying the necessary bulk with some cheap substance, such as straw.

The prices of some of the substances used as food for cattle, taking Rochester wholesale prices as the basis of calculation, will be an indication of the value practical farmers put upon them. We give the price per ton; for it is weight, and not bulk, that we desire in purchasing food, or in estimating its value.

Bran, at 7 cents per bushel of 10 pounds,	$14 00	per ton.
Shorts, at 9 cents per bushel of 14 pounds,	12 86	"
Coarse middlings, at 14 cents per bushel of 20 pounds,	14 00	"
Fine " at 20 cents per bushel of 27 pounds,	14 07	"
" " at 30 cents per bushel of 34 pounds,	17 64	"
Indian corn, at 60 cents per bushel of 60 pounds,	20 00	"
Oats, at 38 cents per bushel of 32 pounds,	23 75	"
Oilcake,	20 00	"

Had we complete analyses of these substances, it would be easy to decide accurately which would be the cheapest food for our purpose. We have no doubt, however, that Indian corn contains much the most *available* non-nitrogenous matter, and that 100 lbs. of ground corn meal mixed with the required bulk of cut straw, will be of more avail in sustaining animal life during the winter than any other food that can be obtained at the same price. We have no doubt, too, that horses can be kept in the same way, at a much less cost than feeding them hay. If, however, they be worked much during winter, they would require a more nitrogenous food, to supply the wear and tear of muscle, and a little oilcake meal, pea meal, or oat meal, might be mixed with the cut straw, &c., —instead of, or in addition to the corn meal—with advantage.

Boussingault estimates, from experiments and chemical analyses, that 100 lbs. of good meadow hay may be replaced by

Bran,	85	pounds.	Peas,	27	pounds.
Oats,	68	"	Potatoes,	280	"
Barley,	65	"	Carrot,	382	"
Maize,	59	"	Wheat straw,	426	"
Rye,	77	"	Oat straw,	383	"
Linseed cake,	22	"	Barley straw,	460	"
Beans,	28	"	Pea straw,	64	"

If this table of equivalents can be relied upon, it appears that 100 lbs of hay is equal to 426 lbs. wheat straw, and that 22 lbs. of oilcake is equal to 100 lbs. of hay, 68 lbs. of oats, 58 lbs. of bran, &c., &c. Boussingault found that his 17 horses, averaging 1,070 lbs. in weight, eat and did well on a ration of 33 lbs. hay per day, working eight hours regularly every day. To obtain the same amount of nutritious food in straw, a horse must eat 165 lbs. of straw per day—a feat he is incapable of performing: but if we give him 30 lbs. of straw, equal to 6 lbs. of hay; 5 lbs. oilcake, equal to 22 lbs. of hay; and 3 lbs. corn meal, equal to 5 lbs. hay; he will receive the same amount of nutritious elements, and in about the same bulk, while the cost of wintering him in this way would be considerably reduced.

By carefully studying the price of substances used as food, and their relative value, most farmers may save considerable expense in keeping their animals, not by stinting them, (no farmer can afford that,) but by using that food which contains the most nutriment for a given cost.

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FATTENING CATTLE AND SHEEP IN WINTER.

THE necessity of manuring the soil by natural or artificial means, before the maximum produce can be obtained, is now all but universally admitted; and whatever difference of opinion exists as to the best means of obtaining and applying manure, all agree that it must be obtained and applied in some way or other, or the soil will gradually become impoverished and incapable of profitable cultivation. In some localities it may be good economy to increase and preserve the fertility of a soil by purchasing *artificial* manures, depending principally on them, and selling off the farm nearly all the produce, and so making no manure by stock. For this purpose, good Peruvian guano, at two and a half cents per pound, is decidedly the cheapest and best artificial manure at present offered for sale. But the great body of farmers can not purchase artificial manures; neither would it pay them if they could; their chief reliance must be on the manure made during the winter months, by cattle, sheep, and other stock, consuming produce grown on the farm. A consideration, therefore, of the effects produced by feeding a given amount of produce on a farm, can not fail to be useful and interesting to every farmer. There are many scientific matters connected with such an inquiry, which it would be interesting to us and to some of our readers to discuss; but at this time we must confine our remarks to the vital question — Will it pay?

In the July number, page 205, we gave the results of some valuable experiments instituted by the Worcester Agricultural Society, Massachusetts, in regard to the economy of cutting food for stock. From the same experiments we have arranged the following table, which shows the amount of hay consumed weekly by each 100 lbs. live weight of animal, the weekly increase of fat, &c., upon each 100 lbs. live weight, and the amount of increase which *one ton of hay* will produce. The bottom line shows the mean live weight of the animals with which the trials were made:

	C. B. DEMOND. Dry Cows.	HARVEY DODGE. Steers.	W. S. LINCOLN. Milch Cows.	A. H. HAWS. Working Oxen.	BOUSSINGAULT. The mean of numerous experim'ts.
Hay, or its equivalent, consumed per week by each 100 lbs. live weight of animal,	17.07 lbs.	18.80 lbs.	18.25 lbs.	16.80 lbs.	37.50 lbs.
Increase of animal per week upon each 100 lbs. live weight of animal,	0.84 lb.	0.78 lb.	1.11 lbs.	0.91 lb.	1.87 lbs.
Increase of animal for *one ton* of hay consumed,	98⅓ lbs.	106 lbs.	122 lbs.	108 lbs.	100 lbs.
Mean weight of animal,	892 lbs.	1110 lbs.	900 lbs.	1567 lbs.	748 lbs.

There is remarkable uniformity in the results obtained by the four New England experimenters, both in regard to the quantity of food consumed per cent. of live weight of animal, and the *increase* obtained upon each 100 lbs. of live weight, and consequently in the weight of meat produced by one ton of hay. The last column is the mean result of many experiments as given by BOUSSINGAULT. The amount of food consumed per cent. of live weight is more than double any of the others, and so is the increase per cent.; so that the weight of beef produced by the consumption of one ton of hay, is nearly the same throughout the series; and we may safely take the mean result as a pretty correct indicative of what we shall obtain in common practice. The mean of the whole of the experiments is 106 lbs. of increase (which we shall consider as fat and meat) for each ton of hay consumed. From this it is evident that, in most places, feeding cattle in winter is attended with direct loss, or at least with no profit. How far the value of the manure may compensate for this loss, we shall inquire further on.

In some extensive experiments on sheep feeding, Mr. LAWES found that South Down sheep eat, per 100 lbs. live weight, 5 lbs. 2 oz. American oilcake, and 16 lbs. 2 oz. of clover hay per week; and increased 1 lb. 3 oz. Another lot eat per 100 lbs. live weight, 5 lbs. 2 oz. linseed, and 14 lbs. 12 oz. clover chaff; and increased 1 lb. 1¾ oz. per week. In the first experiment, 436 lbs. of oilcake and 1,378 lbs. of clover are required to produce 100 lbs. of increase. In the second, there is required 465 lbs. of linseed and 1331 lbs. clover hay to produce 100 lbs. increase. The 436 lbs. oilcake, at $20 per ton, would cost $4.36; the 1,378 lbs. clover hay, at $6 per ton, would be worth $4.14; making the cost of producing 100 lbs. of mutton, $8.50—or eight and a half cents per pound.

From these facts it is most obvious that if feeding is a paying business, it is in the value of the manure made by it, and not in the mere production of beef, mutton, or pork. The whole question, then, of the economy of feeding cattle in winter, appears to rest on the value of the manure made in producing 100 lbs. of meat. To answer this question satisfactorily, requires much more data than we at present command. There are, too, many points involved in its settlement that are much disputed. Under such circumstances, therefore, we submit our own views, believing that they will ultimately be found not far from the truth.

In the first place, it is necessary to have some standard manure, the value of which is fixed, to compare with that made by feeding with different substances. For this purpose we know of nothing better than Peruvian guano, the consumption of which is now very great, and is steadily increasing. Its retail price is $2.50 per hundred. A first rate sample contains 16 per cent. of ammonia, and 25 per cent. of phosphate of lime, &c. The phosphate of lime is worth about one cent per pound; for it can be purchased for that in other forms, such as animal charcoal. Therefore, the price paid for ammonia in guano is nearly 16 cents per pound, and we know of no cheaper source of it. The hay used in the experiments given in the table, was what is called "English meadow hay." It contains about 1.2 per cent. of nitrogen, or *one ton would contain twenty-four pounds nitrogen.* We may estimate the amount of *ammonia* in the excrements to be equal to the amount of *nitrogen* consumed in the food. Therefore, in consuming one ton of hay by cattle, we get 106 lbs. beef and 24 lbs. of ammonia in the manure, worth, at sixteen cents per pound, $3.84. The ton of hay, too, would contain 14 lbs. phosphate of lime; and estimating that 3 lbs. phosphoric acid are retained in the increase of animal, would leave 8 lbs. phosphate of lime in the manure. This, as we have said, is worth 8 cents. If we call the potash, soda, sulphuric acid, &c., worth eight cents more; we get, in consuming one ton of hay on the farm, by horses, cattle, or sheep, $4 worth of manure. The 106 lbs. of beef, at 5 cents per pound, is $5.30. Adding the $4 worth of manure, makes the return for one ton of hay, $9.30.

With these data, any farmer can tell whether, in his locality, it is preferable to sell the produce or consume it on the farm—it depends on the relative price of hay and meat.

If oilcake and clover hay be used as food, the manure will be much more valuable than where hay only is eaten. Thus, taking the results of Mr. LAWES above quoted, we have, to produce 100 lbs. of mutton, 436 lbs. oilcake, which contained 21.84 lbs. of nitrogen, and 1,378 lbs. clover hay, containing 29.08 of nitrogen — making in total food consumed to produce 100 lbs. increase, 51 lbs. of nitrogen. According to our former estimate, this would give 51 lbs. of ammonia in the manure, and, at 16 cents per pound, would be worth $8.16. The oilcake, too, would contain 8.72 lbs. phosphoric acid, the clover hay 6.24 lbs. This, estimating 3 lbs. as taken up in the 100 lbs. increase, would leave about 24 lbs. of phosphate of lime, &c., in the manure, worth 24 cents. If we allow 10 cents for the potash, soda, &c., the value of the manure made in producing 100 lbs. of meat with oilcake and clover, will be $8.50. This, it will be seen, is exactly the value of the food eaten, reckoning the oilcake at $20 and the clover hay at $6 per ton; so that we get the 100 lbs. increase of animal for nothing, except the labor of attending the animals.

From these facts, which are undoubtedly true in their comparative character, we conclude that while it is of questionable economy to feed hay to cattle in winter, the production of meat by oilcake and clover chaff is attended with considerable ultimate profit. There are probably no other substances used as food, that would give so good a result; clover containing more nitrogen than meadow hay, or any of the different kinds of grasses, and oilcake is perhaps the most highly nitrogenous substance used as food by herbivorous animals. Beans, peas, and lentils, approximate closely to oilcake in their per centage of nitrogen; and their growth and consumption on the farm can not be too highly recommended, or be too extensively adopted by all farmers. Even admitting that, weight for weight, the cereals wheat, rye, oats, barley, and maize, are as good for feeding purposes as the leguminous seeds beans, peas, and lentils, or as oilcake, (which, however, is by no means the case,) the manure made from them would not be half so valuable; and, as we have shown, it is to the value of manure that we must look to make fatting stock a profitable business. Leaving the value of the manure out of the calculation, feeding is in most cases attended with direct loss: reckoning the value of the manure, and feeding with oilcake, beans or peas, and clover hay, it is attended with considerable profit.

Many will be inclined to object to these conclusions. We submit them, however, hoping that they will not be cast aside with a careless perusal, but be thoroughly investigated, when we think their justness will be evident. At all events, if they lead to thought and an examination of the matter, some good will be accomplished. The value of manure we have estimated according to the present price of guano. The subject is a deeply interesting and important one to every cultivator of the soil.

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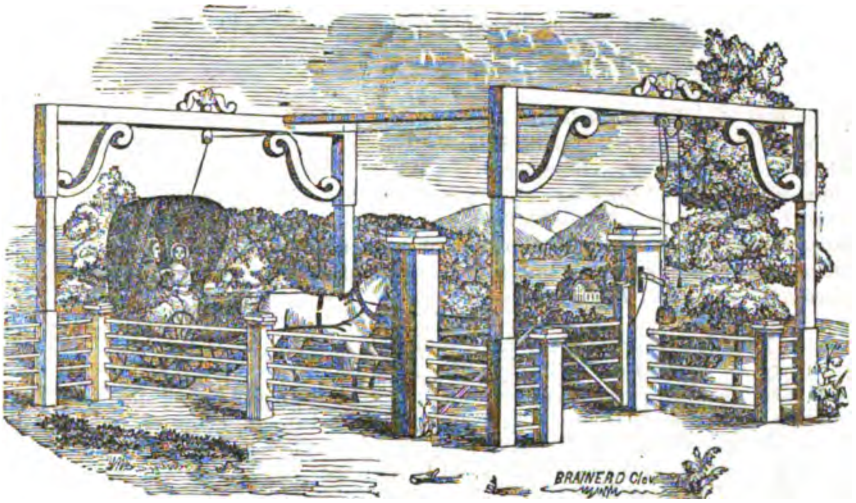
Prepare for the Storm.—Winter is now fast approaching, and of course all our readers have made preparation to give him a warm reception. The necessity for this is so apparent, that but few perhaps neglect it in the main; yet how many there are who, when the cold weather is really upon them, have cause to regret that some things have been left undone that should have been done. They then resolve that the next winter shall not find them in so unprepared a condition. The next winter they repeat their good resolves, and try to satisfy a troubled conscience, and thus the matter ends for a year. To such — to all — we say, look about your premises, — your house, and barn, and stables, — and see what more you can do, even if it is not absolutely necessary, to make more comfortable yourself and family, and all living creatures that look to you to protect them from the winter's blast; and to save from injury the crops you have stored, and which you proudly look upon as the result of your summer's toil. Do your work up thoroughly in this respect, and you can enjoy the winter's fire, the visits of your friends, the reading of your agricultural papers with a peaceful conscience, laugh and grow fat, and come out in the spring with new life and energy for another season of labor.

IMPROVEMENT IN FARM GATES.

We have been furnished by Mr. Enoch Woolman, the inventor, who resides near Damascoville, Mahoning county, Ohio, with the accompanying engraving and description of his improvement in farm gates. We understand that a number of them have been introduced in the neighborhood where the patentee resides, and that they give good satisfaction.



> "The principal improvement consists in its being so constructed that a person in a carriage or on horseback, can pass through it without alighting. On approaching from either way, the person takes hold of a rope, which hangs over the center of the road, and pulls gently for a short time, and the gate comes open and fastens itself; and then in driving a carriage or wagon through, one of the wheels runs over a trigger fixed on the ground, which unfastens it, when it immediately shuts and fastens itself again. The only difference in passing a person on horseback is this: In pulling the rope to open the gate, care must be taken not to pull it far enough to allow it to fasten itself; but by pulling it about two-thirds of the way open, the horseman can easily pass through before it shuts itself again. The machinery by which these movements are performed, is simple, and not liable to get out of repair, and the whole structure is substantial and durable, and will, no doubt, commend itself to the favorable notice of those for whose convenience it is intended. A model of this gate was presented for examination at the World's Fair in London, and received from the committee a very favorable notice."

Nothing adds more to the appearance of a farm, or is of more convenience, than good farm gates; and while we are not prepared to recommend this gate for the adoption of farmers, we are prepared to say to all, see that you have good gates wherever convenience and safety require them. Many will prefer having them made by mechanics, while others can well employ their leisure time in winter in making them; and if a few more are made than is thought necessary, they will not come amiss. Every farmer should have a few common tools, and a workshop, where he can employ himself usefully on a rainy day. We have known farmers — and so have you, dear reader — who made all kinds of miserable shifts for gates, using bars and many other inconvenient contrivances, and yet who lounged away enough time every year to furnish each field with a good gate. This, perhaps, is the result more of thoughtlessness than indolence. If no shop and no tools are prepared, a person can easily excuse himself; but when shop and tools are all ready, inviting to work, few men are so indolent as not to accept the invitation. Therefore, get a few good tools, and prepare a little workshop, and the work is more than half done.

Condensed Correspondence.

Mulching Potatoes.—Last spring I tried a small experiment on potatoes, and am so well satisfied with the result that I shall try it on a larger scale next year. I planted and covered my potatoes as usual, but on one part of the field I covered the land with straw about six inches deep. We dug the potatoes last week; those on the covered land were much larger and yielded better than those not covered. One of the potatoes on the covered part weighed 2 lbs. 5 oz. The covered ones were much easier dug, and we save the labor of hoeing. I used wheat and oat straw, but suppose any refuse straw will answer. L. Morris.—*Windsor, Asht. Co., Ohio.*

A Singular Fact.—In the spring or summer of ——, a neighbor of mine put into his pen a very large hog, desiring to feed him until the following January. He was fed on corn meal and the refuse of the kitchen, from a common large trough in which, after eating, he would lie. In the month of August his appetite failed him and his growth seemed arrested. He was, however, carefully fed until the last of September, when finding he was not improving he was slaughtered, and on examining his stomach it was found to contain a large ball of hair resembling in size, and somewhat in shape, a goose egg, and so tightly knit together as to be separated only by application of the axe. C. P. Ramsdell.—*Venango Co., Pa.*

Oregon Peas, &c.—Enclosed please find a small package of the Oregon Pea, lately brought from that country. It is remarkable for its productiveness of both vine and pea, is said to make the best of hay in large quantity on poor land, bears till frost, will lie on the ground all winter without rotting, and is excellent for table use. It is small, but grows in bunches so that you can gather them very fast, say from ten to twelve pods at a grasp. It is not a climbing pea, and has a stalk greatly resembling our cotton. For pasturing, it would be very fine; also for manuring land by plowing under. It should be planted early.

I have raised the China corn this year. I got it from Kentucky. It produces a great deal of grain and fodder. I think it is the same as the Doura corn. It brings from ten to eighteen heads to the hill; the first heads were ripe the second week in August. It is still bearing, and I think will not stop until cold weather. I will send you a package, if you want it, without charge. A. H. Bradford.—*Brownsville, Tenn.*

We will plant the peas early next spring and report the result. Shall be pleased to receive a few grains of the corn.

Woolen Rags as Manure.—As a fitting return for your trouble in answering my inquiry in the May number, in regard to the application of Woolen Rags as a Manure, I now send you the result of my so doing. In my former letter I said nothing about the quality of the land I intended planting. It was a light yellow sand, and had been cropped with wheat the year previous and sowed with clover, which had not, however, taken well. I planted the piece, just one-third of an acre, part on the 10th of May, and the other part about the 20th, in rows three feet apart, putting the sets one foot apart. They would, I think, have produced more if only eight or nine inches apart. I first drew the rows, and then, after cutting them up, scatterred the rags, at the rate of one ton to the acre, dry, in just the state I saved them, in the rows and dropped my sets *on the rags*, covering them up in the usual manner. I hoed them three times, and the product is just 75½ bush. of the largest and best Pink-Eye potatoes I ever saw. The rags now appear but little decomposed. I purposely left two rows without rags; the difference in the appearance of the potatoes during their growth, and in the quality and quantity of the product, was very striking. I have just formed a manure heap, as follows: first, a layer of horse dung and litter; then a layer of woolen rags; then a layer of spent lime; then another layer of rags; continuing thus to the top, on which I put a heavy coat of the same as at the bottom. With it I intend dressing my garden in the spring. The piece on which I used the rags the present year, I intend again to plant with potatoes next year. J. C.—*Toronto, C. W.*

Such a heap needs a covering of loam or garden mould to retain the ammonia liberated by the lime from the decaying rags and dung.

PRODUCTIONS OF AGRICULTURE IN THE UNITED STATES.—SEVENTH CENSUS,—1860.

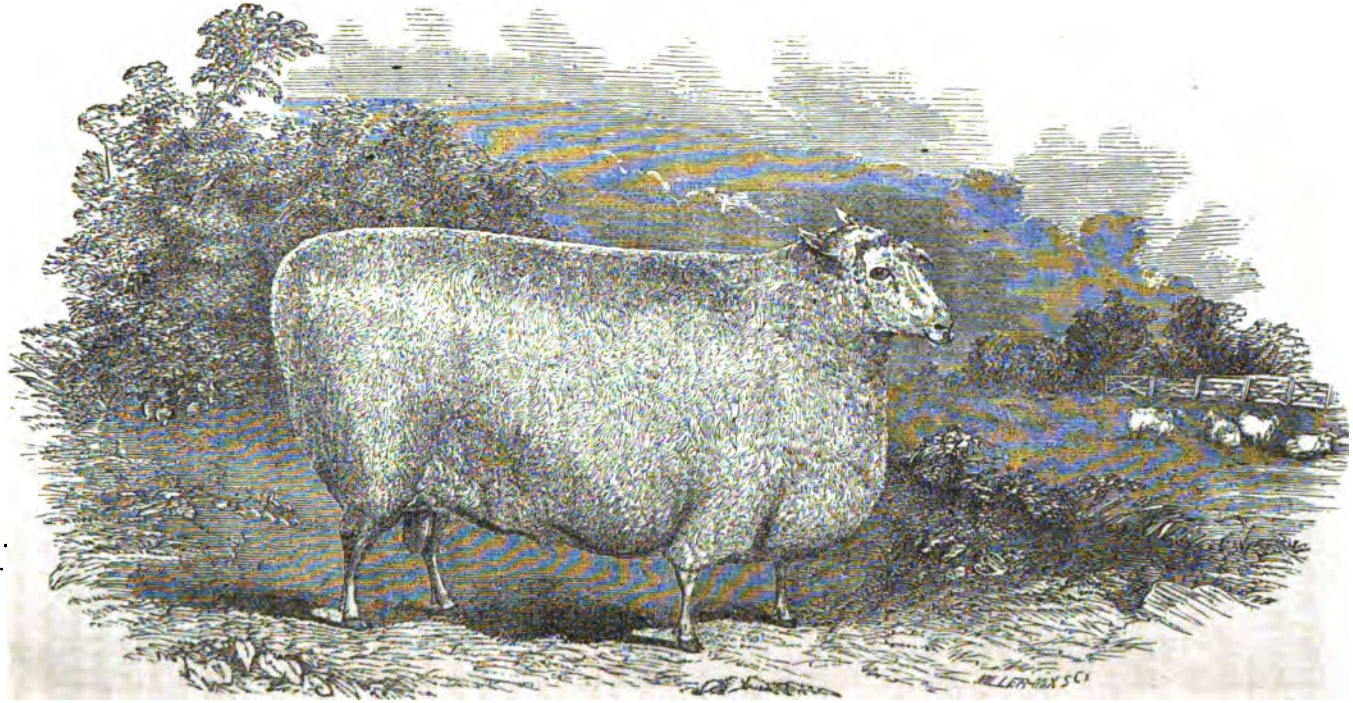
STATES.	Acres land improved.	Acres land unimprov-ed.	Caash value of Farms.	Value Farming imple'ts & machinery	Horses.	Asses & Mules.	Milch Cows.	Working Oxen	Other Cattle.	Sheep.	Swine.	Value of Live Stock.	Wheat, bushels of.	Rye, bushels of	Indian Corn, bushels of.
MAINE, . . .	2.039.596	2.515.797	54.861.748	2.284.554	41.721	55	133.556	83·893	125.890	451.577	54.598	9.705.726	296.259	102.916	1.750.056
NEW HAMPSHIRE,	2.251.488	1.140.926	55.245.997	2.314.125	34.233	19	94.277	59.027	114.606	384.756	63.487	8.871.901	185.658	183.117	1.573.670
VERMONT, . .	2.591.379	1.525.368	59.727.731	2.790.237	61.057	218	146.146	48.497	154.025	919.992	66.278	12.640.248	525.925	176.207	2.032.616
MASSACHUSETTS,	2.133.436	1.222.576	109.076.347	3.209.584	42.216	34	130.099	46.611	83.284	188.651	81.119	9.649.710	31.221	481.021	2.345.490
RHODE ISLAND,	356.487	197.451	17.070.802	497.201	6.168	1	28.698	8.189	9.375	44.296	19.509	1,532.637	49	26.409	539.201
CONNECTICUT, .	1.768.178	615 701	72.726.422	1.892.541	26.879	49	85.461	46.988	80.226	174.181	76.472	7.467.490	41.762	600.893	1.935.043
NEW YORK, . .	12.408.968	6.710.020	554.546.642	22.084.920	447.014	963	931.324	178.909	767.406	3.453.241	1.018.252	73.570.499	13.121.498	4.148.182	17.858.400
NEW JERSEY, .	1.767.991	984.985	120.237.511	4.425.503	63.955	4.089	118.736	12.070	80.455	160.488	250.370	10.679.291	1.601.190	1.255.578	8.759.704
PENNSYLVANIA, .	8.628.619	6.294.728	407.876.099	14.722.541	350.398	2.259	530.224	61.527	562.195	1.822.357	1.040.366	41.500.053	15.367.691	4.805.160	19.835.214
DELAWARE, . .	580.862	375.282	18.880.031	510.279	13.852	791	19.248	9.797	24.166	27.503	56.261	1.849.281	482.511	8.066	3.145.533
MARYLAND, . .	2.797.905	1.836.445	87.178.545	2.463.443	75.684	5.644	86.859	34.135	98.595	177.902	352.911	7.997.634	4.494.680	226.014	11.104.631
DIST. COLUMBIA,	16.267	11.187	1.730.460	40.320	824	57	813	104	123	150	1.635	71.643	17.370	5.509	65.230
VIRGINIA, . .	10.361.155	15.792.176	216.401.441	7.021.772	272.403	21.480	317.619	89·513	669.137	1.310.004	1.830.743	33.656.659	11.232.616	458.930	35.254.319
NORTH CAROLINA,	5.453.977	15.543.010	67.891.766	3.931.532	148.693	25.259	221.799	37.309	434.402	595.249	1.812.813	17.717.647	2.130.102	229.563	27.941.051
SOUTH CAROLINA,	4.072.651	12.145.049	82.431.684	4.136.354	97.171	37.483	193.244	20.507	563.935	285.551	1.065.503	15.060.015	1.066.277	43.790	16.271.454
GEORGIA, . . .	6.378.479	16.442.900	95.753.445	5.894·150	151.331	57.379	324.223	73.286	690.019	560.435	2.168.617	25.728.416	1.088.534	53.750	30.080.099
FLORIDA, . . .	319.049	1.236.240	6.323.109	658.795	10.848	5.002	72.876	5.794	182.415	23.311	209.453	2.880.058	1.027	1.152	1.996.809
ALABAMA, . .	4.435.614	7.702.067	64.323.224	5.125.663	128.001	59.895	227.791	66.961	433.263	371.880	1.904.540	21.690.112	294.044	17.261	28.754.048
MISSISSIPPI, . .	3.444.358	7.046.061	54.738.634	5.762.927	115.460	54.547	214.231	83.485	436.254	304.929	1.582.734	19.403.662	137.990	9.606	22.446.552
LOUISIANA, . .	1.590.025	3.939.018	75.814.398	11.576.938	89.514	44.849	105.576	54.968	414.798	110.333	597.301	11.152.275	417	475	10.226.373
TEXAS, . . .	639.107	14.454.669	16.398.768	2.133.731	75.419	12.364	214.758	49.982	636.805	99.098	683.914	10.266.880	41.689	3.108	5.926.611
ARKANSAS, . .	781.531	1.816.684	15.265.245	1.601.296	60.197	11.559	93.151	34.239	165.320	91.256	836.727	6.647.969	199.639	8.047	8.893.939
TENNESSEE, . .	5.175.173	13.808.849	97.851.212	5.360.220	270.636	75.303	250.459	86.255	414.051	811.591	3.114.111	29.978.016	1.619.386	89.163	52.276.223
KENTUCKY, . .	11.368.270	10.972.478	154.330.262	5.169.037	315.682	65.609	247.475	62.074	443.763	1.102.121	2.861.163	29.591.387	2.140.822	415.073	58.675.291
OHIO, ...	9.851.493	8.146.000	358.758.603	12.750.585	463.397	3.423	544.499	65.381	749.067	3.942.929	1.964.770	44.121.741	14.487.351	425.718	59.078.695
MICHIGAN, . .	1.929.110	2.454.780	51.872.446	2.891.371	58.506	70	99.676	55.350	119.471	746.435	205.847	8.008.734	4.925.889	105.871	5.641.420
INDIANA, . . .	5.046.543	7.746.879	136.385.173	6.704.444	314.299	6.599	284.554	40.221	389.891	1.122.493	2.263.776	22.478.555	6.214.458	78.792	52.964.363
ILLINOIS, . . .	5.039.545	6.997.867	96.133.290	6.405.561	267.653	10.573	294.671	76.156	541.209	894.043	1.915.910	24.209.258	9.414.575	83.364	57.646.984
MISSOURI, . .	2.924.991	6.767.937	63.057.482	3.965.945	223.593	41.508	228.553	111.268	445.615	756.309	1.692.043	19.766.851	2.966.928	44.112	36.069.543
IOWA, ...	824.682	1.911.382	16.657.567	1.172.869	38.536	754	45.704	21.892	69.025	149.960	323.247	3.689.275	1.530.581	19.916	8.656.799
WISCONSIN, . .	1.045.499	1.931.159	28.528.563	1.641.568	30.179	156	64.339	42.801	76.293	124.892	159.276	4.879.385	4.286.131	81.253	1.988.979
CALIFORNIA, . .	62.324	3.831.571	3.874.041	103·483	21.719	1.666	4.280	4.780	253.599	17.574	2.776	3.351.058	17.328		12.236
MINNESOTA, . .	5.035	23.846	161.948	15.981	860	14	607	655	740	80	734	92.859	1.401	125	16.725
OREGON, . . .	132.857	299.951	2.849.170	183.423	8.046	420	9.427	8.[illegible]14	24.188	15.382	30.325	1.876.189	211.943	106	2.918
UTAH, ...	16.333	30.516	311.799	84.288	2.429	325	4.861	4.766	2.489	3.262	914	546.968	107.702	210	9.899
NEW MEXICO. .	166.201	124.370	1.653.952	77.960	5.079	8.654	10.635	12.257	10.085	377.271	7.314	1.494.629	196.516		365.411
	118435.178	184.596.025	3266.925.537	151.605.147	4.325.652	559.070	6.391.916	1.698.261	10.265.180	21.620.482	30.315.719	543.822.711	100.479.150	14.188.457	592.141.230

PRODUCTIONS OF AGRICULTURE IN THE UNITED STATES.—SEVENTH CENSUS —1850.

STATES.	Oats, bushels of.	Rice, lbs. of.	Tobacco, lbs. of.	Ginned Cotton, bales of 400 lb. each	Wool, lbs. of.	Peas and Beans, bushels of.	Irish Potatoes, bush. of.	Sweet Potatoes, bush. of.	Barley, bushels of.	Buckwheat, bushels of.	Value of Orchard produc's in Dol's.	Wine, gallons of.	Value of Produce Market Gardens	Butter, lbs. of.	Cheese, lbs. of.
MAINE, . . .	2.181.037				1.364.034	205.541	3.436.040		151.731	104.523	342.865	724	122.387	9.243.811	2.434.454
NEW HAMPSHIRE,	973.381		50		1.108.476	70.856	4.304.919		70.256	65.265	248.563	344	56.810	6.977.056	3.196.563
VERMONT, . .	2.307.714				3.410.993	101.859	4·947.351		42.157	208.699	315.045	659	18.853	11.871.451	8.729.834
MASSACHUSETTS,	1.165.106		138.346		585.136	43.709	3.585.384		112.385	106.095	463.995	4.688	600.020	8.071.370	7.088.142
RHODE ISLAND,	215.232				129.692	6.346	651.029		18.875	1.245	63.994	1.013	98.298	995.670	316.508
CONNECTICUT, .	1.255.738		1.267.624		497.454	19.090	2.689.725	80	19.099	229.297	175.118	4.269	196.874	6.498.119	5.363.277
NEW YORK, . .	26.552.814		83.189		10.071.301	741.636	15.398.362	5.629	3.585.059	3.183.955	1.761.950	9.172	912.047	79.766.094	49.741.413
NEW JERSEY, .	3.378.063		610		375.396	14.174	3.207.236	508.015	6.492	878.934	607.268	1.811	475·242	9.487.210	365.756
PENNSYLVANIA, .	21.538.156		912.651		4.481.570	55.231	5.980.732	52.172	165.584	2.193.692	723.389	25.590	688.714	39.878.418	2.505.034
DELAWARE, . .	604.518				57.768	4.120	240.542	65.443	56	8.615	46.574	145	12.714	1.055.308	3.187
MARYLAND, . .	2.242.151		21.407.497		480.226	12.816	764.939	208.993	745	103.671	164.051	1.431	200.869	3.806.160	3.975
DIST. COLUMBIA,	8.134		7.800		525	7.754	28.292	3.497	75	378	14.843	863	67.222	14.872	1.500
VIRGINIA, . .	10.179.045	17.154	56.803.218	3.947	2.860.765	521.581	1,316.933	1.813.671	25.437	214.898	177.137	5.408	183.047	11.089.359	436.298
NORTH CAROLINA,	4.052.078	5.465.868	11.984.786	73.849	970.738	1.584.252	620.318	5.095.709	2.735	16.704	34.348	11·058	39.462	4.146.290	95.921
SOUTH CAROLINA,	2 322.155	159.930.613	74.285	300.901	487.233	1.026.900	136.494	4.337.469	4.583	283	35.108	5.880	47.286	2.981.850	4.970
GEORGIA, . . .	3.820.044	38.950.691	423.924	499.091	990.019	1.142.011	227.379	6.986.428	11.501	250	92.776	796	75.500	4.640.559	46.976
FLORIDA, . . .	66.586	1.075.090	998.614	45.131	23.247	135.359	7.828	757.226		55	1.280	10	8.721	371.498	18.015
ALABAMA, . .	2.965.697	2.311.252	164.990	564.429	657.118	892.701	246.001	5.475.204	3.958	348	15.408	220	84.821	4.008.811	31.412
MISSISSIPPI, . .	1.503.288	2.719.856	49.960	484.293	559.619	1.072.757	261.482	4.741.795	229	1.121	50.405	407	46.250	4.346.234	21.191
LOUISIANA, . .	89.637	4.425.349	26.878	178.737	199.897	161.732	95.632	1.428.453		3	22.359	15	148.329	683.069	1.957
TEXAS, . . .	178.883	87.916	66.897	57.596	131.374	179.332	93.548	1.323.170	4.776	59	12.605	99	12.254	2.326.556	91.619
ARKANSAS, . .	656.183	63.179	218.936	65.346	182.595	285.738	193.832	788.149	177	175	40.141	35	17.150	1.854.239	30.088
TENNESSEE, . .	7.793.086	258.854	20.148.932	194.532	1.364.378	369.321	1.060.844	2.777.716	2.737	19.427	52.894	93	97.183	8.139.585	177.681
KENTUCKY, . .	8.201.311	5.688	55.501.196	758	2.297.403	202.574	1.492.487	998.184	95.343	16.097	106.160	8.093	293.120	9.877.868	213.784
OHIO, ...	13.472.742		10.454.449		10.196.371	60.168	5.057.769	187.991	354.358	638.064	695.921	48.207	214.204	34.449.379	20.819.542
MICHIGAN, . .	2.866.056		1.245		2.043.283	74.254	2.359.897	1.177	75.249	472.917	132.650	1.654	14.738	7.065.878	1.011.492
INDIANA, . . .	5.655.014		1.044.620		2.610.287	35.773	2·083.337	201.711	45.483	149.740	324.940	14.055	72.864	12.881.535	624.564
ILLINOIS, . . .	10.087.241		841.394	14	2.150.113	82.814	2.514.861	157.433	110.795	184.504	446.089	2.997	127·494	12.526.543	1.278.225
MISSOURI, . .	5.243.476	700	17.100.884		1.615.860	45.974	934.627	332:120	9.631	23.590	512.527	10.563	99.454	7.792.499	202.122
IOWA, ...	1.524.345	500	6.041		373.898	4.775	276.120	6.243	25.093	52.516	8.434	420	8.848	2.171.188	209.840
WISCONSIN, . .	3.414.672		1.268		253.963	20.657	1.402.077	879	209.602	79.876	4.823	113	32.142	3.633.750	400.283
CALIFORNIA, . .			1.000		5.520	2.292	9.292	1.000	9.712		17.700	58.055	75.275	705	150
MINNESOTA, . .	30.582				85	10.002	21.145	200	1.316	515			150	1.100	
OREGON, . . .	65.146		325		29.686	6.566	91.326				1.271		90.241	211.461	36.980
UTAH, ...	10.900		70		9.222	289	43.968	60	1.799	332			23.868	83.309	30.998
NEW MEXICO. .	5		8.467		32.901	15.688	3		5	100	8.231	2.663	6.679	111	5.848
	146,533.216	215.312.710	199.739.746	2.468.625	52.518.143	9.219.642	65.781.751	38 2[illegible]5.811	5.167.213	8.955.945	7.720.862	221.249	5.270.130	312.948.915	105.539.599

PRODUCTIONS OF AGRICULTURE IN THE UNITED STATES.—SEVENTH CENSUS,—1850.

STATES.	Hay, tons of.	Clov'r seed bushels of.	Other grass seeds, bush. of.	Hops, lbs. of.	HEMP. Dew Rotted, tons of.	HEMP. Water Rotted, tons of.	Flax, lbs. of.	Flax Seed, bush. of.	Silk Cocoons, lbs. of.	Maple Sugar, lbs. of	Cane sugar, hds. of 1,000 pounds.	Molasses, gallons of.	Beeswax and honey lbs. of.	Value of homemade manufa'es.	Value of animals slaughtered.
MAINE, . . .	755.889	9.097	9.214	40.120			17.081	580	252	93.542		3.167	189.618	513.599	1.646.773
NEW HAMPSHIRE,	598.854	829	8.071	257.174			7.652	189	4.191	1.294.863		9.811	117.140	393.455	1.522.873
VERMONT, . .	866.969	760	14.996	258.513			20.752	939	268	5.980.955		5.997	249.432	278.331	1.871.468
MASSACHUSETTS,	651.807	1.002	5.085	121.595			1.162	72	7	795.525		4.693	59.508	205.333	2.500.924
RHODE ISLAND,	74.818	1.328	3.708	227			85			28		4	6.347	26.495	667.486
CONNECTICUT, .	516.131	13.841	16.608	554			17.928	703	328	50.796		665	93.304	192.252	2.202.266
NEW YORK, . .	3.728.797	88.222	96.473	2.536.299	1	3	940.577	57.963	1.774	10.357.484		56.529	1.756.190	1.280.333	13.573.983
NEW JERSEY, .	435.950	28.280	63.051	2.133			182.965	16.525	23	2.197		954	156.694	112.781	2.638.552
PENNSYLVANIA, .	1.842.970	125.030	53.913	22.088	282	2.006	523.079	41.650	285	2.326.525		50.652	838.509	749.132	8.219.848
DELAWARE, . .	30.159	2.525	1.403	348		570	11.050	858				50	41.248	38.121	373.665
MARYLAND, . .	157.956	15.217	2.561	1.870	63		35.686	2.446	39	47.740		1.430	74.802	111.821	1.954.800
DIST. COLUMBIA,	2.279	3		15									550	2.075	9.038
VIRGINIA, . .	369.098	29.727	23.428	11.506	90	51	999.450	52.318	517	1.227.665		40.322	880.767	2.156.312	7.503.006
NORTH CAROLINA,	145.662	576	1.275	9.246		3	593.796	38.196	229	27.932		704	512.289	2.086.522	5.767.866
SOUTH CAROLINA,	20.925	376	30	26			333	55	123	200	671	15.904	216.281	909.525	1.302.637
GEORGIA, . . .	23.449	132	428	261		73	5.387	622	813	50	1.644	216.150	732.514	1.838.968	6.339.762
FLORIDA, . . .	2.510		2	14			50		6		2.752	352.893	18.971	75.582	514.685
ALABAMA, . .	32.685	138	547	276		70	3.841	67	167	643	8.242	83.428	897.021	1.934.120	4.823.485
MISSISSIPPI, . .	12.505	84	533	473	7		6.65	26	2		388	18.318	397.460	1.164.020	3.636.582
LOUISIANA, . .	25.752	2	97	125					29	255	226.001	10.931.177	96.701	139.232	1.458.990
TEXAS, . . .	8.279	10		7			1.048	26	22		7.351	441.638	380.532	255.719	1.106.032
ARKANSAS, . .	3.977	90	436	157		15	12.291	321	38	9.330		18	192.338	638.217	1.162.913
TENNESSEE, . .	74.092	5.096	9.118	1.032	3.913	1.183	367.807	18.905	1.923	158.557	248	7.223	1.036.572	3.137.710	6.401.765
KENTUCKY, . .	113.655	3.230	21.451	5.304	40.936	14.756	7.793.123	75.579	1.301	437.345	197	40.047	1.156.239	2.456.838	6.459.318
OHIO, ...	443.142	102.197	37.310	63.731	140	50	446.937	118.880	1.552	4.588.209		308.308	804.275	1.712.196	7.439.243
MICHIGAN, . .	404.934	16.989	9.785	10.663	166	37	6.994	1.421	8	2.438.987		19.823	359.232	340.947	1.328.327
INDIANA, . . .	403.230	18.321	11.951	92.796	341	1.071	584.469	36.888	387	2.921.642		180.325	935.329	1.631.039	6.567.935
ILLINOIS, . . .	601.952	3.427	14.380	3.551	142	141	160.063	10.785	47	248.904		8.354	869.444	1.155.902	4.972.286
MISSOURI, . .	116.743	615	4.337	3.130	17.207	5.351	520.008	13.641	186	178.750		5.636	1.327.812	1.663.016	3.349.517
IOWA, ...	89.055	342	2.096	8.242			62.553	1.959	246	78.407		3.162	321.711	221.292	821.164
WISCONSIN, . .	275.662	483	342	15.930	300	2	68.393	1.191		610.976		9.874	131.005	43.621	920.178
CALIFORNIA, . .	2.038		483											7.000	100.173
MINNESOTA, . .	2.019									2.950			80		2.840
OREGON, . . .	373	4	22	8			640					24			164.530
UTAH, ...	4.805	2		50			550	5				58	10	1.392	67.985
NEW MEXICO. .												4.236	2	6.033	82.125
	12.839.141	467.983	413.154	3.467.514	63.588	25.380	13.391.415	562.810	14.763	33.980.457	247.778	12.821.574	14.850.637	27.478.931	119.475.020



A COTSWOLD RAM.

THE PROPERTY OF MR. GEORGE HEWER, OF LEY GORE, NEAR NORTHLEACH, GLOUCESTERSHIRE, ENGLAND, FOR WHICH THE FIRST PRIZE OF $125 WAS AWARDED AT THE MEETING OF THE ROYAL AGRICULTURAL SOCIETY, HELD AT WINDSOR, JULY, 1851.

COTSWOLD SHEEP.

THE meaning of the name Cotswold, is a sheep-fold, and a naked hill or plain. The Cotswold hills, the native tract of this ancient breed of sheep, are of moderate elevation, covered with sweet and nutritious herbage; and though formerly a bleak, wild, and uncultivated district, given wholly to sheep walks, it is now enclosed, cultivated, and greatly improved. The sheep also have undergone a like improvement; so that they now rival the New Leicester in symmetry and early maturity, while they possess a heavier fleece and carcass. They have been crossed with the Leicester with decided advantage; their size and fleece being slightly reduced, but their tendency to fatten and early maturity, as well as the quality of the mutton, are much improved. They have also been crossed with the Hampshire Downs, thereby improving still more the quality of the mutton, but greatly reducing the weight of wool and carcass. The New Oxfordshire breed is supposed to be nothing more than the Cotswold improved by crossing with Leicesters and Hampshire Downs.

The Cotswold sheep have been imported into this country to some extent, and are held in high estimation by those who possess them. Their wool is said to be finer, longer, and heavier, than the improved Leicester; we, however, think that it is by no means a settled point. Their mutton is said to be superior, the fat and lean being more intimately mixed than the Leicesters. The South Down, however, is beyond all comparison the favorite mutton, and is driving all others out of Smithfield market, bringing from two to three cents more per pound than the large sheep.

In the June number, page 177, we stated that in some experiments then being made by Mr. LAWES, on the fatting qualities of several breeds of sheep, it was found that the Hampshire Downs fatted more easily than the Sussex Downs; and that the Cotswold yielded more fat, &c., for a given amount of food, than the Hampshire Downs, or New Oxfordshire sheep. These experiments are not yet finished or published, but a recent letter from Mr. LAWES informs us that the Cotswold increase more for a given amount of food than either the Lincoln, Leicester, New Oxfordshire, or the Hampshire and Sussex Downs. Yet, as we have before said, it is doubtful whether it is good economy to keep these large, coarse sheep, instead of the delicate Sussex Downs; the difference in the price of the mutton being so considerable in the principal English markets. These large sheep, however, yield a greater amount of tallow in proportion to lean meat, than the small breed; and as tallow commands a higher price here than mutton, (the reverse being true in England,) will not butchers pay more, or can they not afford to pay more per pound, for the large breed than for the South Downs and Merinos? The butchers in Rochester we know prefer Leicester to South Down sheep on this very account, the taste of their customers not being so fastidious as the Cockney's, and the inside tallow they obtain makes a profit in favor of large sheep.

The cut on the opposite page is a good representation of probably the best Cotswold ram in Great Britain, for it was awarded the first prize of $125 at the great Cattle Fair of the Royal Agricultural Society of England, held at Windsor in 1851. If further experiments shall confirm the present indications that this breed will lay on more fat for a given amount of food than any other, more attention will be paid to it here in future than it has yet received. For these reasons we have been at considerable expense to give the accompanying engraving. The Cotswold being a very long-wooled, heavy sheep, they will not probably stand the severe winter of the northern and western States as well as the South Down, Merino, or other smaller, close-wooled sheep. The Teeswater, Lincoln, New Oxfordshire, and Leicester sheep, are also open to the same objection; though farmers who keep the Leicesters and other long-wooled sheep in this district and Canada, say that they stand the winter well.

Horticultural Department.

CONDUCTED BY P. BARRY.

THE attention given at the present time to the culture of dwarf fruit trees, both in the garden and orchard, in all parts of the country, renders the subject one of the most important in the whole range of horticulture; and at the hazard of repeating what we may have heretofore said, we will take this occasion to offer a few hints on their management. We are well convinced from hundreds of letters received from those who are engaged or engaging in their culture, that with all the information that has been in various ways elicited within a year or two past, there yet exists a very general want of that particular kind of knowledge—and not only knowledge, but of that earnestness and appreciation—so indispensable to success. A vast number of persons who never before gave a thought to fruit culture, are all at once tempted into it by the irresistible attractiveness of some dwarf trees, not over three or four years old, which they have seen loaded with magnificent fruit in a neighbor's garden. They look upon this as an example of fruit culture "made easy," and as a proof—as proof it is—that half a life time need not be spent in waiting for their trees to bear. A resolution is at once formed to plant a garden, perhaps an orchard. The ground is plowed after a fashion, the nearest oracle is consulted in regard to the *best sorts*, the trees are procured and planted; and there the work ends. The next year, or year after, the trees are expected to be loaded with such beautiful fruit as those which first awoke their enthusiasm and enticed them to become planters; but alas! where are they? Not one to be seen, perhaps; and not only that, but the trees generally are wanting in that vigorous, luxuriant appearance, that indicates a perfect state of health; they are, in fact, *unthrifty* and *unfruitful*, looking quite as much like dying as living. At this stage of the proceedings, it is suggested by a knowing one that these dwarf trees are a "humbug." "I told you so." Thus results, and thus will result, the hasty, ill-advised planting enterprizes of a multitude of persons. We are by no means drawing upon the imagination in this matter, and we have not the least doubt but that many who read this will recognise the course of proceeding pointed out as bearing a striking resemblance to theirs.

We are very far from being disposed to aggravate the difficulties of fruit culture, or to try to persuade people that there is any mystery in the art of good cultivation, or any obstacle in the way, that common care and skill can not remove. On the contrary, we aim, and have always aimed, at giving every encouragement in our power consistent with the truth. We must confess, however, that we are frequently surprized at the comparative recklessness with which people embark in planting—spend perhaps ten, twenty, or even fifty dollars for trees, without possessing a single correct practical idea of their treatment; without having consulted any reliable work, or engaged the assistance of a competent person; relying merely upon the uncertain light of a few vague ideas picked up from some very questionable sources. What else can such people reasonably expect but a failure? And if a failure happen them, they should at once take the blame to themselves, and hasten to make amends.

Having thus alluded to what may be termed *mal practice*, we will sketch very briefly the course we would recommend. When a plantation of dwarf trees has been determined upon, whether of 10 trees or 1000, the following considerations should be carefully considered, and all the information in regard to them be obtained from the most reliable sources:

First, *The Soil.* Is it of a suitable character for the purpose? Is it too wet, or too dry? Does it require draining, subsoil plowing, or trenching and manuring? It should always be understood that dwarf trees require a soil of the best quality; and that, too, kept in the best condition. The roots do not extend like the roots of standard trees, and must obtain a liberal supply of food from a small compass. When the soil is right in regard to dryness, depth, and richness, the next consideration should be—

The Trees. These should be on stocks most suitable for dwarfing the species; they should be healthy, vigorous, and of such growth as to be easily moulded into the form in which they are to be grown. The matter of stocks is one of the most important, and should be considered as though the entire success of the undertaking depended upon it. There is yet, even among experienced growers of trees, a very great want of knowledge on the subject. Most people act with a degree of impatience that in many cases proves fatal to their success. They must have large trees—bearing trees. Tree dealers, as a general thing, say: "Our customers want *large* trees, above all." No man who proceeds upon this principle, can make a fruit garden or orchard that will be either successful or satisfactory. What is it to wait a year, or two years even, compared to having beautiful instead of unsightly trees? We know a gentleman who is at this moment rooting up a plantation made on the principle of the "larger the better," to make room for young, well-shaped trees. Taste and experience will lead to this in time.

Next comes the question of *Varieties.* Here, instead of making out a list of the *best* without regard to circumstances, such should be chosen, and such only, as have been proved to succeed well on the stocks used for dwarfing, and are of such habits of growth as will make their training a thing practicable. In order to secure these objects, it may be necessary to dispense with favorite and first rate sorts; for it is far better to succeed *well* with a good or second rate sort, than to fail with one a degree better. Neither should a large number of varieties be made a special object; for that and entire satisfaction otherwise can rarely be obtained.

Next comes the arrangement and the planting, involving many practical details to which we can not now refer particularly.

And when all this is done, there is the *After Culture;* for trees can take care of themselves no more than domestic animals, and more especially when it is desired to maintain and enjoy a high state of artificial culture. An annual pruning, and pruning and pinching at intervals, are necessary; the nature and objects of which must be studied until well understood. Then there is manuring, which must be done in such a way as to meet the wants of the tree, keeping in view the nature of the soil; for the same quantity or kind of manure will not be applicable in all cases.

We will close by recommending to all who are cultivating dwarf fruit trees, to mulch them with half decomposed stable manure from three to six inches deep, on the commencement of winter. This excludes the frost from the roots near the surface, and the snow and rains dissolve it, and send down its best soluble parts to be taken up by the roots the following spring. This supplies the exhaustion of the previous year, and the trees are sustained in an uniform vigor. Thus mulching accomplishes a two-fold object, and may with great advantage be applied to other than dwarf fruit trees.

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NUMBER OF PLANTS ON AN ACRE, AT GIVEN DISTANCES APART.—The following table may be useful to the gardener, in showing the number of plants or trees that may be raised on an acre of ground, when planted at any of the undermentioned distances. T. T.

Distance apart.	*Number of Plants.*	*Distance apart.*	*Number of Plants.*
1 foot,	43,560	9 feet,	537
1½ feet,	19,360	12 "	302
2 "	10,890	15 "	193
2½ "	6,969	18 "	134
3 "	4,840	21 "	98
4 "	2,722	24 "	75
5 "	1,742	27 "	59
6 "	1,210	30 "	48

GARDEN HINTS FOR NOVEMBER.

TRANSPLANTING TREES, in many localities, may be continued through all this month; but the earlier it can be completed, the better. No autumn planted tree can be considered in a safe condition until securely staked, if at all top heavy, and well mulched around the roots. Delicate tall standards, such as the pithy Pawlonia and Catalpa, should be mulched on the stem also—wrapped with straw or dry moss. Trees "heeled in" (laid in by the roots) should be in perfectly dry, light soil, and will be better in a slanting position than erect. Peach and other tender trees would be the better for a covering of evergreen boughs. Care should be taken to clear away all harbor for vermin near trees that are heeled in, as well as in the vicinity of all fruit tree plantations. A few days work *now* will probably save many valuable trees. Every spring we hear complaints from all quarters, about the damages sustained from vermin.

Raspberries should be laid down and covered with a few inches of earth. This is less labor than tying to stakes, and covering with straw.

Strawberry beds should be mulched either with manure, tan-bark, or decayed leaves, leaving the heart of the plant uncovered.

Mulch every tree in the fruit garden. Protect all tender and half hardy trees and shrubs, or rare trees recently planted and not yet well established. Mulch them at the roots with leaves or tan-bark, put around them a few stakes tied together at the top, and cover with straw or mats. It is bad to bind plants closely during winter.

Tender Roses can be protected by laying down and covering with leaves, tan-bark, or light earth.

Hardy Bulbous Roots, such as hyacinths, tulips, crocus, crown imperials, lilies, narcissus, &c., can be planted as long as the ground remains open; but the beds should be immediately covered a few inches deep with leaves, litter, or tan. All tender border plants should be protected in the same way.

Dahlia Roots, *Gladiolus*, *Tigridias*, *Tuberoses*, and other tender roots and bulbs, should be taken up in good season, as soon as the frost has killed the stems, dried well, and put away on shelves in a dry cellar, or in boxes with sand. It is important to put them away in a *perfectly dry* state.

Operations on the ground, such as digging, manuring, trenching, levelling, &c., can be carried on in many places, even in the north, through the month of December. An inch of frost is no obstacle to such labor, and it never should be deferred till spring.

The Fruit Room will require attention. Apples for use during the latter part of winter and spring, should be put up in dry, clean barrels, and kept in a cellar as cold as possible not to freeze, and perfectly dry. Winter pears may be kept on shelves in a dry, cool cellar; or they may be put in clean boxes, between layers of clean, dry straw, or hay. The longest keepers may be put in the bottom, so as to get them out easily as their season comes. Those who may not have a cellar so dry and cool as it ought to be for pears, can put them among dry hay or straw in small boxes, and place these in other boxes in a dry, cool loft. If freezing be apprehended, a covering of mats or cloth may still be added to secure them. They should be taken into a warm room (60 or 70 deg.) a week or two before they are wanted. *The Root Cellar* will require attention. All decaying vegetables should be instantly removed.

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ON the 7th of October the beautiful residence of the late A. J. DOWNING, at Newburgh, was disposed of at public sale. It contained about five acres; but from the skill of its arrangement it was made to appear of much larger extent. It contains, we think, the finest specimens of ornamental trees in this country. It sold for $18,000, and was purchased by a gentleman residing in Newburgh.

NEW FRENCH CHERRIES.

BY B. DESPORTES, OF ANDRE LE ROY'S NURSERIES, ANGERS, FRANCE.

Some years ago Mr. Le Roy formed, in his nurseries at Angers, a school or experimetal plantation of fruit trees, which has enabled us to prove a very large number of fruits formerly known to us only by name. The spring of this year was very favorable, and we have had an abundant crop on all our fruit trees. We shall profit by this in giving to the readers of the *Genesee Farmer* a description of five varieties of cherries, new or very little known:

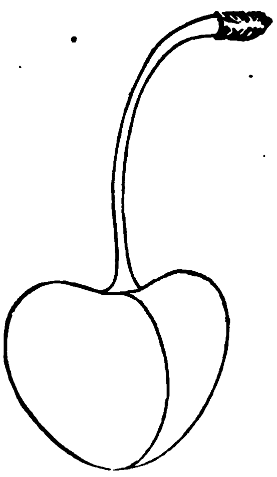
Fig. 1.

Bigarreau Esperin. (Fig. 1.)—A superb cherry, received from Major Esperin, of Belgium. It has been disseminated only a few years, and we have fruited it this season for the first time. I am happy to be able to say that it is every way worthy of all the eulogies which accompanied its appearance in the horticultural world. *Fruit* very large, heart-shaped. *Surface* uneven, one side flattened, the other round, with a slight suture. *Stalk* short, stout, and planted in a deep cavity. *Color* blood red on the sunny side; yellow in the shade. *Flesh* white, slightly adhering to the stone, which is large, long, and channelled. Season of maturity, middle of July. It is necessary that it be well ripened before gathering, for then only does it possess all its excellent qualities. The *leaves* are large, lanceolate, deeply toothed, and have two glands on the petiole. The *tree* is large and vigorous. *Shoots* erect, long, and stout.

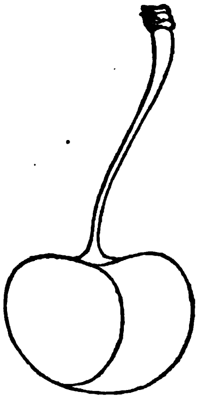
Fig. 2.

Cerise de la Besnardière. (Fig. 2.)—*Fruit* medium size, roundish, flattened at the stalk, and divided on one of its sides by a light suture. *Stalk* one and a half to two inches long, large, and planted in a round, shallow cavity. *Color* bright red throughout. *Flesh* rosy white, parting freely from the stone; tender, succulent, slightly acid. *Stone* small, round, and smooth. Ripe beginning of July. It is moderately productive. *Leaves* small and finely toothed. The *tree* resembles the *May Duke* in its general appearance, grows vigorously, and makes a fine pyramid.

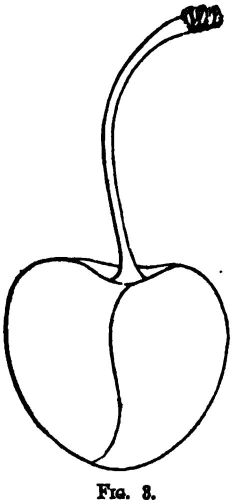
Fig. 3.

Bigarreau Marcelin. (Fig. 3.)—This is certainly one of the most beautiful of cherries. Very large, heart-shaped, flattened on both sides, with a suture on one. *Stalk* short, stout, curved, and planted in a shallow, irregular cavity. *Color* pale

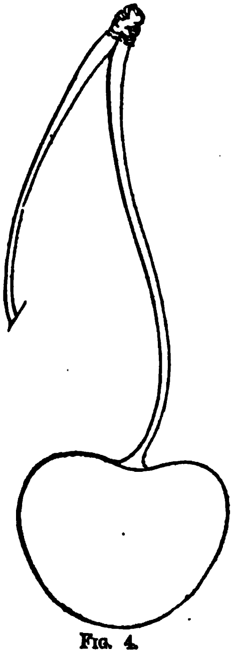
Fig. 4.

red in the shade, bright red in the sun at maturity. *Flesh* white, firm, juicy, somewhat adherent. *Stone* large, rounded on one side. Season, middle of July. I regret much not to know the originator of so good a fruit. The *tree* is vigorous. *Shoots* long, stout, and erect.

Guigne precoce de Tarascon. (*Tarascon Early Guigne.*) Fig. 4.—This is a magnificent large cherry, heart-shaped, very regular, slightly compressed on both sides. *Stalk* usually very long, slender, and wavy; largest at the point of union with the branch. *Flesh* tender, flesh-colored, veined with rose and white, adheres to the stone, which is large and irregular. *Color* bright red, very brilliant at maturity. *Leaves* long, quite regular. *Tree* vigorous. *Shoots* large and spreading, the buds prominent; the young shoots are veined and dotted with grey. Ripe 10th of June. This is a superb and excellent cherry, and merits a place in every garden. I do not know its origin.

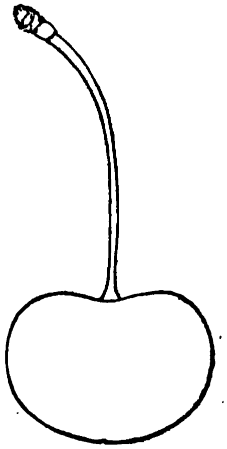

Fig. 5.

Duchesse de Galnau Cherry. (Fig. 5.)—*Fruit* very large, round, compressed at both extremeties. *Stalk* short, curved, and jointed at the end next the branch. *Color* bright red, sometimes deep red, even blackish red at maturity. *Flesh* tender, adhering to the stone, clouded with violet red, juicy, slightly acid, very agreeable. *Stone* round and smooth. *Leaves* short, slightly toothed, and furnished with two glands on the petiole. *Tree* of medium vigor, pyramidal in form. *Shoots* short and erect, short-jointed. In general habit similar to the *May Duke.* Ripe end of June. This is a variety of great merit.

I shall at all times, as opportunity may offer, be happy to make known to a country so eminently horticultural as the Genesee, the progress and discoveries which we make at Angers.

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WESTERN EXHIBITIONS.

By permission of the writer, Dr. J. A. Kennicot, of The Grove, Illinois, we extract from a private letter the following notes on the late agricultural and horticultural exhibitions in Wisconsin and Illinois. The Great West is awake in earnest. The Ohio State Fair eclipsed all other fairs of the kind ever held in this country. Michigan, Illinois, and Wisconsin, are following. Hear what the Doctor says:

"I first attended the Lake County (Illinois) Fair of their united Agricultural and Horticultural Societies, in the very pretty town of Waukegan, formerly Little Fort. A good first show of the former, and a very excellent one, as usual, of the latter. Splendid horses, very fine full blooded and grade cattle, and sheep and swine quite creditable. Farm products, in general, very fair; but implements not so abundant. Fruits and flowers, beyond all expectation, choice and abundant; apples being the great feature, but pears quite encouraging; and plums too, and even a considerable display of peaches under name; grapes, also, in variety, and very well ripened, in fine bunches; glorious dahlias, &c., &c. J. Ambrose Wight, formerly the editor of our *Prairie Farmer*, gave us one of his learned and spicy addresses—full of wit, and beauty, and practical illustrations. The *Prairie Farmer* will miss Mr. Wight.

"Our Convention, or meeting of 'Northwestern Fruit Growers' Association,' at Dixon, was more than respectably attended—over fifty regular *paying* members present, and a house full of those who came to learn. *Such* a show of apples I never saw before—large, fair, and in great variety and abundance—the product of an hundred orchards. Plums and peaches, none to speak of, and only a slim show of pears. A good show of grapes. We had members from five western States; and we all *worked*, and most of us *talked* a little, though no long speeches, except perhaps one from your friend the 'old doctor,' who was called upon, at the public session, to say something on 'Industrial Education,' and the death of our beloved leader—Downing. We passed appropriate resolutions on the last theme, and unanimously endorsed the principle of education 'in a knowledge of things next to us.' But you will get our proceedings, which are to be printed in pamphlet.

"From Dixon we went directly to Milwaukie, to attend the Wisconsin State Fair; and a great Fair the Badgers have had. Their officers all courteous and full of energy and good will; the grounds, a private race course, very extensive and beautiful; and the weather fine during the two first days. Horses of all breeds, from the imported Shetland pony up to the largest and boniest cart horse. It struck me, however, (though I am not learned in these matters,) that the contributors in this line were more *liberal* than *select* in their display of show horses. There were some great goers though, and of *their* merits I could better judge. The *grades* in the cattle line were most abundant; but there were some beautiful animals of pure blood, which, as competent eastern judges assured me, I was not wrong in believing equal to most shown in eastern States. Sheep were there in plenty, and in all their pure excellence and desirable grades. Wisconsin, you know, is a wool-growing state. Swine were there, good pigs too, most of them; and the symptoms of the 'chicken fever' were unmistakable—a dozen or more large lots showing that the affection has reached Wisconsin.

"Bah! I see I have finished my sheet, and said nothing—all common place, if not out of place, as I know little about stock, *scientifically*.

"Well, the products of the farm, and especially the dairy, were abundant and good; and you may depend that the 'Badgers' have been digging in the right way, and that they are in earnest about this Society,—and they ought to be, for they have got the most *active*, as well as *intelligent* and *determined*, young Secretary that any Society can boast. He is as near like B. P. Johnson as a young man of little practical knowledge of agriculture, and but a year or two's experience in office, can possibly be. The Wisconsin State Agricultural Society is in luck, and if Albert C. Ingham remains in his present position until he is thirty years old, (he is only twenty-three now) I predict great things for Wisconsin Agriculture.

"I can't praise the show of fruits and flowers, though both are respectable. Some good late plums; plenty of apples, not quite so large as those of Illinois, nor in so great variety; some pears and grapes, but no great variety. Dahlias, and other late flowers from Kenosha, from Capt. Cahoon I think, were decidedly good. Milwaukie did not show flowers as she might have done, though Mr. Messenger had fifty or sixty sorts of fine Green House plants, in good condition. The show of implements was respectable."

◆

Annual Fall Exhibition of the Genesee Valley Horticultural Society.—This exhibition was held on the 22d and 23d of September. The show of fruits was the best (excepting peaches) ever seen in Rochester. The collections of apples and pears were as good as any, if not the best, we have ever seen; and when spread out on the tables, tastefully arranged, formed a museum of rare interest and beauty.

J. W. Bissell, Esq., exhibited a fine collection of foreign grapes from his vinery, that attracted much attention.

James Vick, Jr., made a good show of annuals, that were very attractive. Asters, Balsams, Ten week Stocks, Phlox Drummondi, Godetias, Leptosiphons, Argemone, &c., were all fine.

The nurserymen made a good display of pot plants and cut flowers. Dahlias, the glory of these autumnal shows usually, were in a great measure wanting, in consequence of the dry weather and swarms of grasshoppers in August and September. C. J. Ryan alone made a fair display.

Mr. Philo Parks, of Victor, presented a collection of wild flowers from his farm.

A few fine vegetables were shown by Mr. Theodore Backus, John Donnellan, and C. F. Crosman.

Mr. Vick exhibited fine Lima beans, Mexican and White Mercer potatoes, and Stowell's sweet corn.

Superb watermelons were shown by Jno. Donnellan. Some of them were sold at the close of the exhibition, for the benefit of the Society, at five or six shillings each. Mr. Donnellan had on his table some fine *Rose winter Radish*, the seeds of which we brought from France.

The attendance of visitors was thin, owing to the prevailing sickness at that time; but those who were present, expressed themselves delighted with the whole affair.

◆

Acknowledgements.—We are indebted to James Roby, Esq., of Brockport, for a basket of *White* and *Gray Doyenne* pears. The specimens of the latter were particularly fine. Mr. R. considers them in some respects superior to the *White*, and we agree with him. The tree is not quite so vigorous in growth as the *White*, but it is hardy and an abundant bearer.

We must take this occasion to say that the lands around Brockport are admirably adapted to the pear, and are destined soon to be largely devoted to its culture.

Also, to Jas. H. Watts, for *Sheldon* pears, which were supposed last season to be the *Oswego Beurre*. Mr. W., in his note accompanying them, says: "The product of our own State, it having originated in Huron, Wayne county, we may indeed congratulate fruit-growers as well as fruit-lovers, that we have now found another *first rate* pear for them to add to their varieties for cultivation.

Ladies' Department.

FLOWERS AND FLOWER SEEDS.

We have received many letters from our female readers, thanking us for our gift of flower seeds, and detailing their methods of cultivation, and the result of their labors. Some beautiful boquets have graced our editorial table, the arrangement of which, as well as the perfection of the flowers, spoke well for the taste and skill of the fair cultivators. That some kinds have failed in some instances, is not strange. The art of cultivating even a dozen varieties of annuals is not learned in one season, and better learned by observation and practice than in any other way. · Those who have cultivated flowers this summer with even partial success, will do better next, and will become the teachers of this beautiful art. Friends and neighbors will seek of them seeds, and instruction in their cultivation, which will be freely given; and thus a love of the beautiful in nature will spread over our happy land. Many plants, such as Ten week Stocks, Petunias, &c., that have not blossomed freely in the open ground, on account of late planting, may be taken up carefully and put in pots, when they will blossom in the house during winter.

DWARF CONVOLVULUS.

Dwarf Convolvulus.—The Dwarf Convolvulus is a beautiful flower, with three distinct colors, blue, yellow, and white; the blue being of every shade, from purple to a delicate azure blue. We have also the white and striped. The species is a native of Spain, Portugal, Sicily, and the north of Africa, and was introduced into England from Portugal early in the seventeenth century. Some botanists suppose this species to have been originally only found in Barbary; but whether introduced or indigenous, it is now a common weed, both in Spain and Portugal. The flowers always fold in gloomy weather and at night. The French call it Belle-de-jour. When the seeds are sown, a shallow drill should be made for them, in which the seeds may be dropped and covered lightly. When the plants come up, they should be thinned so as to stand about an inch apart. They require a dry situation, and rather a rich, light soil. Sow early in the spring, and they will commence flowering in July, and continue until covered with snow. We have several beds now, (Oct. 26th,) exceedingly beautiful, that have been in blossom since early in July.

The Convolvulus major, or *Morning Glory*, is too well known to need a description; it being one of the most common as well as the most beautiful and easily cultivated of our climbing annuals. It requires the same treatment as the Dwarf Convolvulus, but needs strings or poles on which to climb. It makes an excellent covering for arbors, porches, &c.

Editor's Table.

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Transactions of the Wisconsin State Agricultural Society, for 1851.—We are indebted to **Albert C. Ingham**, Esq., Secretary of the Wisconsin State Agricultural Society, for a copy of its Transactions for 1851. It is a well filled volume of 336 pages, and alike creditable to the Secretary, under whose directions, we presume, it was brought into existence, to the Society and State whence it emanates. Wisconsin has great Agricultural resources; and its citizens appreciate them, and proceed at once to their rapid and successful development. This is as it should be; for we do not doubt that the wise suggestions of Dr. **Lathrop**, in his Annual Address before the State Society, in behalf of education in general and a University in particular, will be responded to by the people of that young and promising commonwealth. To avoid the deterioration of their soil, they must early adopt a better system of tillage and husbandry than is pursued in older States.

◆

The Horticulturist.—It will be seen by the Prospectus in our columns, that the *Horticulturist*, heretofore edited by the lamented **Downing**, has been purchased by J. **Vick**, Jr., one of the editors of the *Farmer*, and is to be published in Rochester, edited by P. **Barry**. Those who have read the Horticultural Department of the *Genesee Farmer* will need no guarantee that Mr. **Barry** is eminently fitted for the post he has assumed, at the almost unanimous request of the Horticulturists of the country. Those of our readers who are turning their attention to the cultivation of Fruits and Flowers, or to beautifying their homes, would make a profitable investment in subscribing for the *Horticulturist*. The subscription price is reduced to $2 per year; an edition with Colored Plates is also to be published, at $4.

◆

Peas, and Pork Making.—A friend, from St. Johnsbury, Vt., writes us that the article on Peas and Pork Making, in the September number, differed somewhat from his experience; that he had boiled peas once or twice for his hogs, but they would not eat them. Corn and peas are worth $1.00 per bush., and pork $8.00 per hundred nett, and thinks that at these relative prices it does not pay to feed hogs, except for home consumption.—He thinks that farmers in New England should commence feeding their cattle with hay, corn and roots in February, and have them fit for sale in April or May, when beef is highest. Can fat full grown animals on good hay alone, but growing animals require a little grain, or they will not fatten. In either case, he thinks it good economy to feed a little grain.

Our friend mistook our meaning in supposing us to recommend "boiling peas" for hogs. What we said was, that it was advisable to "soak them from 12 to 24 hours in cold water before feeding them to hogs." They are in consequence of soaking, more easy of mastication, and fewer pass through the animal undigested than when fed dry and hard. We know that hogs do not like "boiled peas," but they manifest no disrelish for them when soaked.

◆

Trial of Implements at Geneva, N. Y., July, 1852.—The following is a list of the Premiums awarded by the N. Y. State Agricultural Society to the successful competitors, at the trial of Implements, at Geneva, in July last. We should have given it last month, but preferred waiting for the official report. Here it is from the Journal of the Society.

Grain Reapers.—1st, T. D. Burrall, Geneva, Burrall's Reaper, Dip. and $50. 2d, J. H. Manny, Wadham's Grove, Illinois, Manny's Convertible Reaper, for grain or grass, 30. 3d, Seymour & Morgan, Brockport, 20.

Mowing Machines.—1st, J. H. Manny, Wadham's Grove, Illinois, Dip. and $50. 2d, Howard & Co., Buffalo, Ketchum's Mowing Machine, 30.

Grain Drills.—1st, P. Seymour, East Bloomfield, N. Y., Dip. and 25. 2d, Bickford & Huffman, Macedon, N. Y., 15. 3d, S. R. Tracy, Newark, N. Y., 10.

Horse Power on the Lever Principle.—1st, J. A. Pitts, Buffalo, Dip. and 25. 2d, Eddy, Dyer & Co., Union Village, Wash. Co., N. Y., 15.

Horse Power, endless chain principle.—1st, Emery & Co., Albany, Dip. and 25. 2d, E. W. Badger, Fly Creek, N. Y., 15.

Iron Horse Power.—1st, B. H. Wakely, McLean, Tompkins Co., Dip. and 25. 2d, Eddy, Dyer & Co., Union Village, N. Y., 15. 3d, J. A. Pitts, Buffalo, 10.

Threshing Machines, with cleaning apparatus.—1st, J. A. Pitts, Buffalo, Dip. and 10. 2d, Hall & Thompson, Rochester, 8.

Threshing Machines, without cleaning apparatus.—Eddy, Dyer & Co., Union Village, N. Y., Dip. and 10.

Seed Planters.—Joshua Woodward, Haverhill, N. H., Dip. and 10.

Cultivator, general purposes.—1st, S. R. Tracy, Newark, Wayne Co., Dip. and 10. 2d, Henry Howe, Canandaigua, 8.

Broadcast Sower.—Pierpont Seymour, East Bloomfield, Dip. and 10.

◆

Australian Wheat.—Several of our friends have requested some of our Australian Wheat, &c.—We had none in our possession at the time and were unable to procure any till the period of sowing was gone by. Another year, however, we shall procure a quantity in season, and shall be happy to send some to any who desire it. Some farmers who have tried it in this section, think it does not ripen early enough here, requiring a warmer climate than Western N. Y. The Multicaul Rye has been sent to all who asked for it.

Inquiries and Answers.

(T. Chase, Otego, N. Y.) The paper was labelled right. The sprig you sent is Sweet Mignonette.

(M. R. Britten, Spring Prairie, Wis.) The standard weight of Flax seed in New York, is 56 lbs.; of Timothy seed, 45 lbs. per bu.

◆

Bees.—Having concluded to give a part of my attention to the raising of bees, I am obliged to make a few inquiries with regard to it. Bees are generally much affected in this part of the country with the miller, which has caused many to abandon the keeping of them. Do you know of any means by which the miller can be destroyed or prevented? Some say that bees should be kept in a house; but I neither know how the house should be constructed, nor how bees should be got into it. By giving what information you can with regard to this, in the "*Farmer*," you will greatly oblige a Canadian subscriber. James Hawksworth.—*Vienna, C. W.*

We give the above letter, and respectfully invite some one familiar with the subject to state what he regards as the best protection against the bee-moth; and the best plan for a bee-house. In the mean time, Mr. Miner's Bee Manual is recommended to our correspondent, as a work worthy of his perusal.

◆

Swamp Muck.—In the month of August last, I deposited one hundred loads of swamp muck in my barn-yard. I propose to apply it to my corn land in the spring, a part of which is an apple orchard. Will it prove beneficial to next season's crop of corn, and also to the fruit trees? In your next number, please suggest the best method of preparing and applying this kind of manure. E. W. Bottum. —*Huron, N. Y.*

We have several times seen swamp muck applied to fair soils in Western New York, and never with any decided benefit. As an absorbent of stable or barn-yard manure, dry muck is valuable; because the ammonia developed in the manure neutralizes the organic acid in the muck that prevents its rotting, and the whole mass (muck and manure) decomposes together, and yields food for plants, apple trees included. All manure in barn-yards is liable to damage and waste from an excess of water; and the hauling of swamp muck into an open yard will not obviate the difficulty. A little water from rain or snow does no injury; but a good deal either carries off a part of the manure, or compels the farmer to haul some nine loads of water to his fields to convey thither one load of solids, whether straw, hay, muck, or dung. This involves a prodigious waste of labor, and can only be avoided by keeping yards in which manure is made, partly, or entirely sheltered from rain, and protected from the droppings of eves, or receiving running streams from without, as we have frequently witnessed.

The art of producing good manure is not so generally, nor so thoroughly understood, as it ought to be. The process of decay or rotting depends partly on the temperature, partly on the chemical nature of the matters operated upon, and partly on the fineness and degree of moisture of the materials. At another time, when our pages are less crowded than at present, we will discuss this interesting and important branch of farm economy, at length.

◆

Winter Barley.—Mr. E. E. Fay, of Marengo, McHenry county, Illinois, wishes to obtain a small parcel of winter barley.

Both barley and oats endure with impunity the winters of the south in the cotton-growing States; but we have never seen either that would be likely to survive, if sown like wheat in autumn, the frosts of central Illinois.

Having written to Mr. Spader in relation to the Winter Barley noticed by him in the May number of the *Farmer*, Mr. S. has kindly sent us the following:

"Yours of the 18th inst. was duly received. In answer, I would say that in consequence of the prevalence of the cholera in many places on the route to your State Fair, I gave up attending as I had expected. Respecting my crop of Barley, I will say that the yield was not so good as the year previous—on an average, I suppose, about 40 bu. per acre—which I think was owing to a part not having been sown till near the middle of October, and the unfavorable weather in the spring. The fore part of March was very pleasant and the young grain grew rapidly, but on the 19th we had a very severe freeze which lasted several days and killed considerable of the Barley, and also the wheat of late sowing. My first sowing, I judge from the shocks per acre, would turn of 60 bushels. A neighbor of mine, who I furnished with seed, had an excellent crop, full 60 bu. per acre. I have not threshed much of my crop, only about 200 or 800 bu. which I sold for seed at 75 cts. per bushel, and suppose I have 1200 bu. for sale. The time is past for sowing. My crop is all up and looks very well. The fall has been favorable for seeding. I can furnish any amount of seed from the next year's crop, in time for the next year's sowing, at such price as may be hereafter agreed on. I began cutting my crop this year on the 18th June, but that was later than usual. From the 1st to the 20th September, in this country, is a good time for sowing. Benj. Spader. —*Logansport, Ind.*

Mr. F. asks "whether summer fallowing prairie land will pay expenses, where the soil is mainly sand and vegetable mold?" He adds: "I wish to know if plowing light soils two or three times is of any use?"

As a general rule, this practice is not to be commended; sometimes, however, where the ground is foul with weeds or grass, repeated plowings are necessary to clean the land, and bring it into fine tilth.

Mr. F. says that chintz bugs cover their fields, and have done considerable damage to the grain crops of that section. A remedy is desired.

◆

Cranberries.—Some four years ago I saw an article on the Culture and Profits of the Cranberry. This induced me to give it a trial. In doing so, I found to my satisfaction that it neither wanted great expense or skill to arrive at the point. In the article alluded to, it was stated that any land that would produce a good crop of corn would produce cranberries. My experience proves that a dry soil will produce plants, and but little or no fruit; while the wet or boggy soil will produce abundance of both. But my object is not to instruct, but to answer an inquiry in your paper last spring, where plants could be had? Now I would say, should there be a call, I would furnish them in any quantity, in boxes holding five bushels and upwards, at $2.50 per bushel, to be delivered at the Railroad Depot or Steamboat Whart. J. Farmer.—*Cape Vincent, Jeff. Co., N. Y.*

◆

Barn and Cow-Stable.—I have been some years a subscriber to your very valuable periodical, and have noticed with pleasure and profit the many designs for cottages and dwellings that have appeared in your paper, and have looked in vain for plans of small barns and out-buildings. Can nothing be said or done to improve these necessary buildings, both in appearance and convenience? My acquaintance is not extensive; but I would say, that although I know of some good models for grain barns, I know of none that are well adapted for storing feed, wintering cattle, and saving manure.

As I am wishing to erect a barn, or building capable of containing twenty cows and their food during winter, and to milk them in or under in summer, will you or some of your able correspondents present a plan having reference to the following considerations:

1. The building should be just large enough; not too large.
2. There should be convenient and easy storage for hay, so as not to pitch it all aloft.
3. Should there be a cellar? If so, how large, &c., to correspond with the room for hay, and number of cattle.
4. Convenience of feeding, and ease of access by each cow.
5. A convenient way and place for saving all the manure, both liquid and solid.

I would also ask what is the best method of confining cattle, whether by stanchions, or by chain or rope? How many feet are required for each cow? What kind of rack or mangers? How many hours in twenty-four may they be confined on a floor?

If you or any one chooses to notice or answer this, together with any suggestions or information relating to stock or buildings, they will favor and benefit me, and possibly some one else. Levi Paddock.—*Huron, N. Y.*

◆

Sheep Disease.—I have been a reader of your valuable paper for three years, and have seen no notice of a disease that is now making fearful ravages among my sheep. The disease is first manifested in their dull and stupid appearance. They soon become lame, often losing the control of a leg, and frequently straining to make water, and although they do not appear in great pain they die in ten or twelve hours, in one instance only having lingered along as many days. I have opened and examined them without finding anything that indicates disease, save a slight infection of the liver—no appearance of the common diseases of the country. I first thought they might have eaten poisoned food, but the disease being confined exclusively to the ewes, seems not to favor that idea. I have been thus particular, hoping you or some of your numerous readers know something of the cause and remedy for this fatal disease. D. N. Sabin.—*Shiawassee, Mich.*

◆

HORTICULTURAL.

(G. L., Meadville, Pa.) To save Peach Buds.—"Earthing up" will effect your object, but the application of grafting wax is not advisable.

(J. D. H., South Butler, N. Y.) You can take your budded peach trees up with safety, and lay them in dry ground for the winter. It will not hurt the buds to be covered with earth.

(C. M., Port Clinton, Ohio.) The large plum you describe as seven and a half inches in circumference one way, and six the other, weighing three ounces, is the *Yellow Magnum bonum*, or *Yellow Egg.*

Basket Willow, or Ozier, can be had in small quantities at least, in most of the nurseries. It could not be grown successfully or profitably on land overflowed six months in the year. You will find some information in back numbers of the *Farmer.*

(D. S., Stockbridge, Mass.) The best time to transplant very large trees is in winter, when the ground is frozen and they can be moved on sleds. A deep trench should be dug around each, at such distance from the tree as will leave an abundance of roots, and when the ball of earth remaining around the roots is frozen solid, the tree can be moved to its new situation. We have seen very large trees thus moved successfully, with a pair of horses and a sled, and three or four handy men. Deciduous trees should have the heads well reduced by a shortening, and in some cases a total lopping off of branches. Some evergreens will also bear this, such as Hemlock, Red Cedar, Arbor Vitæ, &c., &c.

(James A. Nelson, Mercer Co., Pa.) It is not uncommon in some localities for both apple and pear trees to be injured on the trunk, near the ground, by the freezing and thawing in winter, but we cannot understand the injuries or disease you describe as attacking the trunk higher up.

Pear Blight.—Mr. Asa Palmer, near Geneva, N. Y., says that cutting off a portion of the roots of pear trees will preserve or cure them of the blight. We cannot agree with Mr. Palmer.

(M. K., Bentonville, Ind.) Peach Trees.—Planters differ in opinion in regard to the advantages of fall and spring planting. In mild climates, and *dry, light* soil, we would advise fall; in severe climates, or damp soils, the spring. To keep worms from killing them, examine the trees once or twice a year, and pick out with a knife any that are to be found. A peck of leached ashes laid around every tree, in the spring, will aid in keeping them off.

(Several Correspondents.) We have not yet received the proceedings of the Pomological Convention at Philadelphia, but hope to very soon. Copies may possibly be had by applying to some of the Secretaries—James H. Watts, Rochester, F. R. Elliot, Cleveland, or H. W. S. Cleveland, Burlington, N. J.

(R. S. Howe, Lebanon, N. H.) Your box of fruits is received in good order, and we are greatly obliged. We will report upon them in the next number of the *Farmer.*

THE GENESEE FARMER FOR 1853.

One more number completes the present volume. To those who have read the *Farmer* the present year, we need not say that we have spared neither labor nor expense to make our paper interesting and valuable. But for our large and almost unparalleled circulation, every volume we print would cost us more than the price charged to subscribers. To our friends and agents everywhere, we tender our acknowledgements for past favors, and hope to increase our indebtedness another year. Let every subscriber spend an hour in calling the attention of his friends and neighbors to the claims of the *Genesee Farmer*, and we shall more than double our circulation the coming year. Let all engage in this work, and form clubs early.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIV, FOR 1853.

DANIEL LEE, JAMES VICK, Jr., & JOSEPH HARRIS, Editors.

P. BARRY, Conductor of Horticultural Department.

IN issuing a Prospectus for the Fourteenth Volume of the Genesee Farmer, the Publisher flatters himself that it is too widely known, too extensively circulated, and too well read, to render it necessary to state the design of the work. Those who read the Farmer are the best judges of its value, and those unacquainted with it are invited to examine its pages.

The Fourteenth Volume will commence on the 1st of January, and will be issued regularly on the 1st of each month during the year. It will be printed on new type and superior paper, each number containing THIRTY-TWO PAGES, and making at the end of the year a Volume of 384 pages, with title page, index, &c., suitable for binding. The work is appropriately illustrated with beautiful and really valuable engravings of Farm Buildings, Implements, Domestic Animals, Choice Fruit, Flowers, Shrubs, &c.—The Volume for 1852, when bound, will make the most valuable Volume on Agriculture yet published in this country. The Volume for 1853 we design still farther to improve, and hope to be sustained in our efforts by the farmers of the country.

We number among our Contributors, hundreds of the best Practical Farmers in the country, and our readers have through our pages, the benefit of their wisdom and experience. No thinking man can read any number we issue, without receiving some useful hint in regard to the management of crops, stock, or the orchard, of more value than the price of the volume. The *Genesee Farmer* is by far the Cheapest Agricultural Journal published in America.—Our FORTY THOUSAND SUBSCRIBERS place us ahead of all other Agricultural Journals, and enable us to furnish a paper for the trifling sum of *Three or Four Shillings*, equal to any, both in value and beauty. Its position as the *Cheapest*, and at least one of the *Best Agricultural Journals* in the country, is fully established, and we confidently ask for it that support which it merits from the Farmers, Gardeners, and Fruit Culturists of the United States. We invite all who feel the importance of sustaining this work, and extending its usefulness, not only to subscribe themselves, but to introduce it to the patronage of their friends.

Fifty Cents a Year, in Advance.

Five Copies for $2—Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ Post-Masters, Farmers, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post-paid or free) at the risk of the Publisher. Address to

DANIEL LEE,
Rochester, N. Y.

November, 1852.

Postage Law.—By the new Postage Law, which took effect on the 1st of September last, the postage on the *Genesee Farmer* for one year is as follows,—when paid quarterly in advance:

Anywhere in the State of New York, . . 3 cts.
Anywhere in the United States, ... 6 cts.

Northern N. Y. Live Stock Insurance Company, Plattsburgh, N. Y. For terms, please apply to agents of the Company.

Seeds.

FOUL MEADOW GRASS SEED, Genuine; Fine Lawn Grass; English and Italian Ray Grass; White Clover, &c., for sale by RALPH & CO.,

Union Ag. Warehouse and Seed Store, 23 Fulton St, New York. [11-2t]

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no farther preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

Monroe Nursery.

TO those who have purchased trees of me, at the Monroe Nursery, it is unnecessary to say anything here; but the public generally I would recommend to call and examine my stock of trees, for they are, without doubt, the most thrifty and stocky that can be found in any nursery around. It is true, I can not boast of 100,000 of one kind, 100,000 of another, 50,000 of another, &c.; but this I can say, that I have 40,000 fine, thrifty, well grown apple trees, three and four years old, all of the best leading varieties, ready for delivery this fall. Also, cherries, pears, peaches, &c., in like proportion, all of which are offered low, and very low to wholesale jobbers.

My facilities for obtaining buds and scions from bearing trees, are likewise unsurpassed by any other nursery, having, since I have owned and carried on the nursery, (now going on ten years,) set out new standards of all the best leading varieties, all of which are in bearing condition.

CHARLES POWIS.

Greece, Ridge Plank Road, Oct., 1850.

PREMIUMS FOR 1853.

During the year 1852 the editors of the Genesee Farmer circulated over Eight Hundred Dollars worth of the best Agricultural Books published in the country. These works, in addition to *Forty Thousand Copies Monthly of our own Journal*, scattered all over the land, even to Oregon and California, we believe have exerted, and will continue to exert a very beneficial influence. Their influence is not confined to those who receive them, but is felt by their children, their friends and neighbors. They must increase the knowledge, and consequently the power, and the wealth of those for whose especial benefit we labor. It is our intention to increase the circulation of these works. We do this for the good they accomplish, as well as a slight compensation to our friends—the friends of Rural Improvement—particularly Post-Masters throughout the country, who act as voluntary Agents, without the expectation of pecuniary reward. Below we give our List of Premiums for 1853.

PREMIUMS TO INDIVIDUALS.

1st. THIRTY DOLLARS in Agricultural Books, to the person who shall send us the largest number of subscribers, at the club prices, before the 10th day of April next, so that we may announce the successful competitor in the May number.

2d. TWENTY DOLLARS in *Agricultural Books*, to the person who shall send us the second highest list, as above.

3d. TEN DOLLARS, in *Agricultural Books*, to the person who sends us the third highest list.

In order to make the circulation of *Good Agricultural Books* More General and Beneficial, and to reward every one of the friends of the Genesee Farmer for their exertions in its behalf, we will give to those not entitled to either of the above premiums, the following *Books*, free of postage, or *Extra Papers*, as may be preferred:

1st. To every person person who sends SIXTEEN Subscribers, at our club terms of three shillings each, one extra copy of the Farmer.

2d. To every person sending for TWENTY-FOUR Copies, as above, any Agricultural Book valued at 50 cents, or two extra copies of the Farmer.

3d. To every person ordering THIRTY-TWO Copies of the Farmer, any Agricultural Book worth 75 cents, or three extra copies of the Farmer.

4th. For FORTY, any Agricultural Book valued at $1, or four extra copies of the Farmer.

5th. For FORTY-EIGHT, any Agricultural Book worth $1,25, or five extra copies of the Farmer.

☞ For larger numbers, Books or papers given in the *same proportion*. To *save cost* to our friends, we *pre-pay postage* on all Books sent as premiums, and persons entitled will please state whether they wish Books or extra papers, and make their selection when they send orders, if they desire Books; or if they have not obtained as many subscribers as they intend to, we will delay sending until the club is full, if so requested. We do not require that all the papers of a club should be sent to one Post Office. If necessary for the convenience of subscribers, we are willing to send to as many different Offices as there are members of the Club. We write the names on each paper, when a number is sent to the same Office, if so desired, but when convenient Post-Masters would confer a favor by having the whole number ordered at their own office, sent to their own address. ☜

COUNTY PREMIUMS.

To aid as much as possible in establishing *County Agricultural Libraries*, we offer the following Premiums, which we hope will aid in the more general establishment of County Libraries:

1st. We will give an AGRICULTURAL LIBRARY worth FORTY DOLLARS to the County in which the *greatest number of copies of the Genesee Farmer is taken by the 10th of April next*. This Library to be kept as a County Agricultural Library, under the care of the Agricultural Society.

2d. To the County in which the next greatest number is taken, an *Agricultural Library worth* TWENTY-FIVE DOLLARS, on the same conditions as above.

As the above two premiums will probably be taken in the *State of New York*, and as we wish to give our friends in other States an equal chance in the competition, we offer the same premiums to COUNTIES OUT OF THE STATE OF NEW YORK, thus:

1st. To the *County out of the State of New York* in which the greatest number of copies of our paper is taken, an Agricultural Library worth FORTY DOLLARS.

2d. To the next *County out of N. York*, a Library worth TWENTY-FIVE DOLLARS.

☞ As all Subscriptions commence anew with the year, places where the Farmer was never before taken will stand an equal chance in the competition for premiums. Individuals will receive the premiums to which they may be entitled for their individual benefit, as a compensation for their personal exertions, and the numbers they send will be credited to the Counties where the papers are sent, so that the premiums to individuals will not at all interfere with the County premiums, or the County with individuals.

BACK VOLUMES of the Farmer will be furnished, if desired, and counted the same as new subscribers. We shall keep a correct account of the subscribers sent by each person and county. In the May number we shall announce the premiums. *Libraries* will be forwarded per order, immediately after the announcement, and persons or societies can select their own books, or leave the selection to us. ☞ Specimen numbers, show-bills, &c., sent to all post-paid applicants. All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at our risk.

THE HORTICULTURIST FOR 1853.

The melancholy death of A. J. Downing deprived the readers of the *Horticulturist* of the labors of one whose essays they had so long read with unmingled pleasure and profit. Since that sad event became known, the great question among the horticulturists of the country, who have evinced a deep interest in the matter, has been, who should succeed to this important post. With singular unanimity, it has been assigned to P. Barry, of Rochester, who has been urgently solicited in various ways, both publicly and privately, to take charge of the work. This, from the nature of his engagements, he could not do while the *Horticulturist* was published at Albany. The subscriber, who has long been connected with Mr. Barry, as one of the editors of the *Genesee Farmer*, has therefore purchased the *Horticulturist*, and after the conclusion of the present volume it will be PUBLISHED AT ROCHESTER, and EDITED BY P. BARRY, assisted by many of the best Horticulturists of the country, whose communications will materially add to its value. The ARCHITECTURAL DEPARTMENT will be conducted by gentlemen of ability and reputation.

To render the work accessible to a greater number, and consequently more beneficial, the price will be reduced to Two Dollars per year, *in advance*, and at the same time various improvements made. Each number will contain a full page engraving of some new, rare and valuable fruit or flower, drawn from nature, and engraved in a style not excelled.

Still further to add to the value of the work and meet the improving taste and increasing wants of the Horticultural community, we shall also publish an edition with COLORED PLATES, each number containing a full page engraving of some new, rare and valuable fruit or flower, correctly colored from nature, by the best living artists in this line. This will be a new and important feature, in this country, and must command the attention and patronage of both professional and amateur Horticulturists. As the number of colored plates we can furnish will be limited, from the care and time required in their preparation, those who wish the *Colored Edition of the Horticulturist for* 1853 will do well to order immediately. Price with colored plates, Four Dollars, *in advance*.

All who cultivate fruit or flowers should read the *Horticulturist*, as it is devoted entirely to Horticulture and its kindred arts Landscape Gardening and Rural Architecture, and will keep its readers advised of everything new on the subject, either in Europe or America.

It will be our aim not only to make the Horticulturist superior both in style and matter to any work of the character in this country, but equal to any of the Horticultural Journals of Europe, and we confidently ask the aid and co-operation of the Horticulturists of the country. The January number will be issued early in December, and specimen numbers will be sent to all who will interest themselves in its behalf. The volume to commence on the 1st of January, 1853.

Address J. VICK, Jr., Publisher,
November 1, 1852. *Rochester, N. Y.*

Emery's Patent First Premium, 1852,
RAILROAD HORSE POWER,
THRESHING MACHINES, SEPARATORS, &c.,
Western New York Agency.
E. D. Hallock, Agricultural Warehouse,
No. 50. State St., Rochester, N. Y.

THE Subscriber, late from the Albany Agricultural Works, Warehouse, and Seed Store, where he has been engaged for the past six years, has secured the sole Agency for the sale of Emery's Patent Railroad Horse Power for Rochester and vicinity, so widely and favorably known throughout the country, and which has, without exception, taken every highest premium awarded in the States of Ohio, Michigan, and in New York, for the best Railroad Horse Powers, in 1850, 1851, and again in 1852, also at the Provincial Fair of Canada, recently held at Toronto, was awarded a Diploma and £2, of which the judges highly commend the principle and workmanship of this Power, now offer them at manufacturer's prices, with the transportation added, and subject to the warrantee as follows:

"To work to the satisfaction of the purchasers as represented in Circulars and Catalogues, or to be returned within three months and full purchase money to be refunded."

For further particulars see Circulars and Catalogues, which are furnished gratis on application to the subscriber.

The attention of the Farming public is solicited, and a careful investigation into the construction of this Power, and its comparative merits, as well as price, is requested before purchasing elsewhere.

The Wheeler Power is also offered *ten* dollars cheaper than heretofore by any other agency, and subject to same warrantee as given by others for the same kinds. Samples will be kept constantly on hand, and to insure promptness and avoid disappointments in supplying them, farmers are requested to send in their orders at as early a date as possible.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in this vicinity, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public. [11-tf] E. D. HALLOCK.

Important to Fruit Growers.

THE subscriber having been for a number of years engaged in rearing and experimenting with Fruit and Fruit Trees, now offers the result of his observations to the public. He has discovered a certain substance which, if applied to Fruit Trees, renders both their trunks and foliage obnoxious to vermin. The Yellows, in the Peach tree, is permanently cured by one or two applications. He has also discovered a cheap and successful mode of preserving fruit during the winter, or for an indefinite period, entirely free from rot.

Persons wishing to avail themselves of these discoveries, by enclosing *One Dollar* in a letter to J. W. WILLIAMS, Pottstown P. O., Montgomery Co., Penn., will receive the mode of application by return of mail.

November, 1852.—*2

Superphosphate of Lime.

THE genuine article, manufactured by C. Duburg, in bags of 150 lbs. each. The subscribers have made a contract for a large quantity. We are now prepared to supply any quantity that may be ordered. Farmers and gardeners would do well to call on us before purchasing elsewhere, as we are now able to sell for a less price than heretofore offered. Every bag is branded "C. Duburg, Extra, No. 1."

LONGETT & GRIFFING,

State Agricultural Warehouse, No. 25 Cliff Street, New York. [11-tf]

NEW YORK STATE
AGRICULTURAL WORKS.
Wheeler, Melick, & Co.

WILL, at the shortest notice, fill all orders for Machines made by them, among which are their Double and Single Horse Powers and Overshot Threshers and Separators, Combined Threshers and Winnowers, Circular Saw Mills, Clover Hullers, Horse Powers geered for Churning, Feed Cutters for Horse Power use, &c., &c,

The scarcity of fodder which prevails in many parts of the country in consequence of the present dry season, induces them to call the especial attention of farmers to their

Wheeler's Pennsylvania Feed Cutter,

as being peculiarly adapted to the emergency.

This Machine is made expressly for Horse Power use, and is very strong and substantial. In Pennsylvania it is used chiefly for cutting corn stalks, although it cuts straw and hay equally well, and will cut from half an inch to two inches in length. It is simple and compact, having four plain, straight knives which are attached in such a manner that they may be taken off and ground, and then replaced without producing the least variation. All the wearing parts are made so that they can be adjusted by means of screws, with a common wrench, and any person can keep the Machine in the most perfect order. In cutting corn stalks they are crushed between strong iron feed rolls, and being cut short, the coarse stalks are split into small pieces, which reduces the whole to very fine feed. They are capable, with one horse, of cutting 150 bu. per hour.

Price, $28. WHEELER, MELICK & CO.
Corner of Hamilton and Liberty Streets.
Albany, Nov., 1852.

GENEVA NURSERIES.
Fruit and Ornamental Trees and Seedlings.
PEAR SEED, APPLE SEED, &c., &c.

W. T, & E. SMITH desire to call the attention of Nurserymen, Dealers, and Fruit Growers, to their large stock of Thrifty and Well Grown Fruit and Ornamental Trees, suitable for Garden, Orchard, and Ornamental planting.

40,000 Apple, large and thrifty.
15,000 Peach, 2 years old.
8,000 Pear, standard and dwarf.
20,000 Cherry, standard and dwarf.
10,000 Orange Quince, 4 years old.
8,000 Horse Chestnut, 6 to 8 feet high.
10,000 Mountain Ash, 6 to 8 feet high.
4,000 Evergreens—Balsam Fir, Norway Spruce, and Austrian Pine.
2,000 Grape Vines, mostly Isabella.
3,000 Plum, Apricot, Nectarine, and Almond.
10,000 Basket Willow Cuttings.
20,000 Apple Seedlings, 1 year old.
10,000 Cherry Seedlings.
25,000 European Mountain A[illegible] $8 per 1000.
8,000 English Thorn, for H[illegible]
2,000 Privet, for hedges and [illegible]ens.
20,000 Horse Chestnut, $8 pe[illegible] 1000.
1,000 Downing Colossal Rhubarb.

Strawberries, 30 varieties; Roses, Dahlias, Gooseberries, Currants, Raspberries, Asparagus, Roots, Pie Plant (Early Lemon), Pear Seed, Apple Seed, &c. &c.

November, 1852.—[*2]

Prices of Agricultural Products at the Principal Markets in the United States. — Oct. 23, 1852.

	New York.		Boston.		Rochester.		Chicago.		Cincinnati.		Philadelphia.	
Beef, per 100 lbs.	$5.00 a	5.50	$6.00 a	9.00	$5.50 a	6.00						
do mess, per bbl.	9.50	15.00	12.00	14.00	10.00	10.50						
Pork, per 100 lbs.					6.50	7.00	5.00		$5.00	5.50		
do mess, per bbl.	17.00	17.12½	19.50		16.00	19.00	18.00	20.00			18.50	19.00
Lard, per lb.		11½	12	12½	9	10	10	11	10 a	11½	12	12½
Butter, do	16	25		24	18	20	15	16	12	18	12	14
Cheese, do	8	9½	7	9	6	7	5½	7	7	8		
Flour, per bbl.	4.50	5.87½	4.62	5.75	4.50	4.75	2.50	3.50		3.30	4.87½	4.87½
Wheat, per bush.	85	1.12½	90	1.15	93	94	63	72	57	60	96	1.04
Corn, shelled, per bu.	75	76	68	76		62½		50	40	42		74
Rye, do		85	80	85	56	63	52	58	48	53		85
Oats, do	42	46½	44	50	34	38	[illegible]	31	27	28	34	39
Barley, do	72	77				62½	[illegible]	52	45	50		
Clover seed, do	8 pr. lb.		8 a 11 per lb.			5.50	12 per lb.		4.00	5.00	5.00	5.12
Timothy seed, do	$16 per ton.		3.00	3.50	2.50	2.68		2.25	1.75	2.00	2.37½	2.75
Flax seed, do	1.30	1.40			1.25	1.37½		1.00		90		
Hay, per ton	20.00	22.50	20.00	24.00	10.00	15.00						
Wool, per lb	36	52	35	50	30	40	22	36	23	45	37½	60
Wood, hard, per cord			6.00	6.50	3.50	4.50	3.00	4.00				

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ANDRE LEROY,
Nurseryman, at Angers, France,

HONORARY and Corresponding Member of the principal Horticultural Societies of the United States and Europe, begs leave to inform his friends and all the Nurserymen of the Union in general, that he has made large preparations and has now on hand, a considerable stock of the finest Evergreen Seedlings, Roses, Fruits, and Ornamental Trees, &c. &c., most suitable for the American market. The experiments of several years, of putting up large orders for the United States, enables him to flatter himself that he has now all the necessary knowlepge to give full satisfaction, and to insure the delivery, in good order, of all the Trees, &c., ordered.

He also begs to inform all Nurserymen who have not already received the supplement for 1852, to his Catalogue for 1851—that it can be obtained free of any charge at his Agent's office, M. Ed. Bossange, 138 Pearl St., New York, who will also attend to forwarding all orders sent to him, and to pass through the Custom House; and re-ship all goods ordered without any delay and with the greatest care.

Address M. ANDRE LEROY, Angers, France, care of
ED. BOSSANGE,
[11-2t] 138 Pearl Street, New York.

Sausage Cutters and Stuffers.

A VERY superior article, made of wood and iron, that will cut from 70 to 100 lbs. per hour. Price $4, $5 and $6 each. For sale by
LONGETT & GRIFFING,
[11-3t] No. 25 Cliff St., New York.

Premium Dahlias.

THE subscribers offer for sale this Autumn and the ensuing Spring, 10,000 Dahlia Roots, which have proved to be the choicest collection in the States and Canadas. [See records of the Fairs for the last four years.]

Persons commencing the Nursery business, and Amateurs, will find it to their advantage to give us a call, or make enquiries before purchasing elsewhere.
C. J. RYAN & CO.,
Rochester and Charlotte Plank Road Nurseries, Rochester, N. Y. [11-tf]

For Sale.

ONE of the desirable farms in the Chenango Valley, situated two miles from the village of Oxford, containg 220 acres, river flat—grain land, pasture, wood land, and orcharding. A large and convenient dwelling house, two large barns, with sheds and out-houses. Watered by the Chenango river, a creek, (on which is a saw-mill,) and by never-failing springs. On it are more than seven hundred rods of stone wall. Persons wishing to purchase, are desired to look at the crops and stock on the farm. Inquire of
JOHN TRACY,
Oct., 1852.—10-3t* Oxford, N. Y.

Important to Farmers.

IT IS generally conceded by all intelligent farmers that cutting the food for cattle will save from 25 to 30 per cent. Bertholf's Oblique Rotary Corn Stalk, Hay and Straw Cutter, is conceded by all that have used it to be far superior to any other, as it destroys all hard substances in the stalk leaving it soft and easily eaten. It turns very easy and is not liable to get out of order, and, with care, will last an age. It has been awarded Four First Premiums and a Silver Medal, by the American Institute. For further particulars address (post paid) the patentee, H. W. BERTHOLF, Sugar Loaf, Orange Co., N. Y., or LONGETT & GRIFFING, 25 Cliff St., New York, who are agents.
☞ Patent Rights for sale. [11-3t]

BOOK AGENTS WANTED.

GOOD salesmen can earn from $1 to $3 per day, in selling
AGRICULTURAL BOOKS,
POLITICAL CAMPAIGN BOOKS,
LARGE AND SMALL BIBLES,
POLITICAL AND OTHER PICTURES,
Uncle Tom's Log Cabin; Uncle Tom as it is; Northwood, Mrs. Hale's new book; Cheap Publications; Gold Medals, Gen. Scott and Gen. Pierce; together with other new books.

I will furnish agents with from $15 to $30 worth of books for cash, and take back all the unsold books and refund the money. Agents can make from 25 to 100 per cent. profit, and in this way are not compelled to keep their stock if not sold. Books can be sent by Express to any address. Money can be safely sent by mail. Address
D. M. DEWEY,
Oct., 1852. Arcade Hall, Rochester, N. Y.

THE GENESEE FARMER

Vol. XIII. ROCHESTER, N. Y., DECEMBER, 1852. No. XII.

THE PHILOSOPHY OF TILLAGE — HORSE-HOEING WHEAT.

If one were asked to name the practical farmer, who, of all men from Adam down to the present generation, had most successfully studied the Philosophy of Tillage, he might without hesitation claim the distinguished honor for Jethro Tull, the inventor of drill husbandry, and the first to cultivate wheat by means of horse hoes. This great man can be best be introduced to the reader, and the date indicated when seed-drilling commenced, by allowing him to speak for himself:

> "About the year 1701, when I had contrived my drill for planting sainfoin, I made use of it for wheat, drilling many rows at once, which made the work more compendious, and performed it much better than hands could, making them of a foot distance. Drilling in the seed and covering it did not all amount to sixpence per acre expense, which was about ten times over-paid by the seed that was saved; for one bushel to an acre was the quantity drilled. There remained no need for hand work but for the hoeing, and this did cost from half a crown to four shillings per acre. * * * This was such an improvement to land, [the hand-hoeing of drilled wheat,] that when one part of a strong whitish ground, all of equal goodness, and equally fallowed and tilled, was dunged and sown in the common manner, and the other part thus drilled and hand-hoed, without dung, the hoed part was not only the best crop, but the whole piece being fallowed the next year, and sown all alike, by a tenant, the hoed part produced a so much better crop of wheat than the dunged part, that a stranger would have believed, by looking on it, that that part had been dunged which was not, and that part not to have been dunged which really was."

While engaged in drilling and hand-hoeing wheat, in the early part of the 18th century, this illustrious farmer invented a valuable substitute for hand hoes which he called a "*horse hoe*," as it was worked by horses or oxen, like a common plow or cultivator. At that early day, little arable land was artificially drained in England, and wheat required to be grown on narrow and comparatively high beds to avoid damage from an excess of water in the soil. Mr. Tull laid his summer fallows, or stubble grounds, on which wheat was to be sown, in beds that were from five to six feet from center to center, and quite crowning. Along the middle of each bed he drilled from two to four rows of wheat — usually three — and eight or ten inches apart. At eight inches distance between the rows, only sixteen inches would be occupied on the ground by three rows,—one on each side of the center row and eight inches from it — leaving four feet and eight inches between the wheat in one bed and that in another. This was the widest central space ever allowed; and thirty inches the least that would well permit the use of the horse hoe, which might be called a cultivator, or shovel plow, or two-share plow; for during his forty years' practice and experimenting, the form and character of his tillage implements were often changed and improved.

The genius of this inventor prompted him to investigate and master the true principles of cultivating the earth. He plowed and hoed his growing wheat, and often stirred the ground, not because others tilled it, but to accomplish a clearly understood, and truly philosophic purpose. What was this purpose? It was not to imitate nature in the production of plants, for she never plows, nor harrows, nor hoes the earth to obtain her most abundant fruits. His policy was purely a theory, or the ideal of a close thinking mind. He viewed and contemplated soils in this light: A square foot of impervious earth presents only 144 square inches to the chemical action and mellowing influence of the atmosphere. If a cubic foot of this solid earth was exposed, then six sides in place of one would come in contact with the air, and bring 864 square inches instead of 144 under the control of ærial powers. If this mass of earth were cut up into cubic inches, it would form 1728, each of which would present six sides to atmospheric agencies, making an aggregate surface of 10,368 square inches. In each of these cubic inches there are 1728 cubic lines, each of which would present six equal surfaces, and be, like the cubic foot, equally capable of subdivision; and so on *ad infinitum*. Tull saw that tillage does no more than comminute the soil; and that this pulverization really makes the desired pasture for the roots of all cultivated plants.

If it be in our time profitable, and a general practice to stir the earth above and near the roots of maize, which is a cereal, with a plow, cultivator, or hoe, may not growing wheat plants be cultivated, or horse-hoed, with equal benefit? On this point we have no doubt whatever. The soil between rows of rice (another cereal,) is profitably cultivated, as it is in the production of both sweet and Irish potatoes, in the culture of tobacco, cotton, sugar-cane, beans, peas, and garden vegetables. What is the full meaning, what the occult changes in the soil, wrought by the most perfect tillage?

First, It enables the arated mold, loam, or clay and sand, to absorb and condense from the atmosphere all the gaseous elements of crops, and particularly ammonia. When plants and animals die and rot on the ground, as they ever do in a state of nature, a large portion of their weight and substance is diffused through the air in well known gases. Hence it is that the atmosphere is charged with the food of plants, and may, when wise farmers shall know how to command this food, feed growing grain and roots for indefinite ages. That vegetable mold, mellow loam, and well pulverised clay, do absorb all the combustible elements of crops from the atmosphere, is not to be disputed. The only debateable points are the condition of the soil most favorable to the condensation of gases, and whether *it will pay* so to till the ground on which wheat plants are growing in straight rows as to depend mainly or wholly on the atmosphere for carbonic acid, nitric acid, and ammonia. To eleminate potash, soda, lime, and magnesia, from their insoluble silicates in the debris of rocks, from which the staple of all soils is derived, they need a good deal of what is technically called organic matter, viz: ammonia and carbonic acid. Hitherto intelligent farmers have depended on vegetable mold and manure for solvents of the silicates, phosphates, chlorides, and sulphates of alkalies and alkaline earths, so necessary to supply the incombustible, inorganic part of plants, which is called ashes when they are burnt. But adopting both the theory and practice of Tull, with slight modifications, induced by the light of modern science and discoveries, experiments are now being made in England, with every prospect of success, to draw all, or nearly all, the organic food of growing plants from the air, without the aid of guano, or manure of any kind. Tull's leading idea was, that the cheapest manure in the world exists unseen and mostly in a latent state, in the soil and atmosphere, and in quantity sufficient for all practical purposes in all coming time. The soundness of this view must depend mainly on our success in drawing ammonia and carbonic acid, and, perhaps, chlorine, sulphur, and phosphorus, (which abound in a volatile and gaseous condition,) from the atmosphere.

The Rev. S. Smith, of Lois-Weedon Vicarage, in Northampton, England, has succeeded in growing six or eight successive crops of wheat on the same acre, without any other manure than such as a soil finely tilled, twenty inches in depth, abstracted from the atmosphere. Of course many more years must elapse before the enduring advantages of this Tullian system can be fully demonstrated.

Mr. Hoskyns, who has recently visited Mr. Smith's experimental field, stated to the Council of the Royal Agricultural Society that the results were only so wonderful that they did not receive the credit they deserved; although when personally inspected, they carried at once a conviction of their perfect feasibility, notwithstanding the marvellous absence of all manure, as technically so understood, in the carrying out of his simple but effective process. Others have seen the Reverend gentleman's experiments; and among them Mr. Gadesden, who thus bore testimony before the Council: "The soil was a stiff one, and so stiff that Mr. Smith's own tenant farmer expostulated with him in reference to the circumstance; but although no manure had been used, it had *become so fertile* that it would be necessary to cast off the top staple and bring up the clay. Mr. Smith had six acres in wheat, and intended to extend this system of cultivation to twenty. He understood that the Earl of Essex had fifty acres on the same system."

Mr. John M. Paine "could simply, but entirely, confirm all that Mr. Hoskyns had said with regard to Mr. Smith's experimental wheat fields under the Tullian mode of culture as practiced by him. He would, however, very briefly state what he saw, and the impression which Mr. Smith's crops left on his mind. The first time that he saw them was immediately after inspecting Mr. Lawes' experimental wheat at Rothamsted, about the last day of June. He had thus a good opportunity of forming a comparison of the appearance of the respective crops at that time. Mr. Lawes' highly manured nitrogenous plots were then looking splendidly well. Mr. Paine had also some of his own similarly manured, which was likewise very promising, and which did realize from seven to seven and a half quarters per acre—*i. e.*, from 56 to 58 bushels. He had thus in his mind's eye some very good standards of comparison, and he was bound to state that Mr. Smith's *far exceeded either of them* [his own and Mr. Lawes'] in luxuriant appearance and promise of a crop. When he first beheld them, he could not help exclaiming, 'This land has been lavishly dressed with ammoniacal manure.' And so, indeed, it had been from atmospherical sources; for this we knew and could appreciate, after Mr. Way's most valuable discovery of the absorptive and retentive powers of clay soils." Mr. Paine's remarks throughout were alike instructive and interesting, but our quite limited space forbids further quotation without condensation. He could perceive nothing peculiar in the geological structure of the land at Lois-Weedon which would lead one to infer that Mr. Smith's success in producing seven consecutive crops was at all attributable to that cause. It was manifestly what would be good wheat land when well drained and well cultivated. With common management, the surrounding country did not produce large crops.

On land which had been cropped several years without manure, Mr. Paine drilled a half bushel of wheat per acre, on the 9th of November, 1851, on the Tullian plan. It could not be done earlier for reasons that need not be stated. Wheat barely got fairly up before frosts and winter, and looked thin and badly, and could not be trenched before March. The ground was then broken eighteen inches deep between the rows, and some of the subsoil brought to the surface. The rows had been hoed, and at that time the whole field had a most luxuriant and promising appearance; although like Mr. Smith's it had too gross an aspect than otherwise. As the experiments now stand, the best returns may be expected by planting three rows of wheat within a space of twenty inches, making a central row and one on either side ten inches distant, and then leaving, as in planting corn in this country, an interval for the roots to spread and imbibe nourishment, of thirty inches.

So far as the principles of tillage are concerned, the difference between maize and wheat is not worth writing about. In neither should the plants stand too thickly, and in both their roots should have a deep, permeable, and rich pasture to secure a generous harvest. Thick and thin planting are terms too indefinite for scientific use. Ten years ago we urged upon the attention of wheat growers this view of seeding land to wheat, and feeding the young and needy plants until they arrive at full maturity. One may have just food enough to rear and fatten two pigs, and with proper care and skill he may have each gain a pound a day in weight for three hundred days. If he shall attempt to rear and fatten four pigs instead of two, they may be grown; but to fatten them is out of the question. After they have reached a certain size, to keep so much flesh and blood alive, and from losing weight, will consume all the food within their reach, and of course such consumption is without profit to their owner. This waste of food and of time lessens the amount of meat and fat produced full fifty per cent.; for the four pigs must live all their allotted days, and eat every day, although they grow but half of the time, and only half grow while about it. What is true of four pigs, is equally true of four or five million wheat plants, pastured on a supply of nutriment equal to the full development of just half the number. You get a little more straw, more vegetable bone, (silicates) and a greater number of heads, or ears of grain; but beyond all question, nature gives you fewer and smaller seeds, less flour and less gluten and starch for bread.

This brings us to the subject of agricultural physiology — one on which, strange to say, no book has ever been published in the United States. Wheat culture is inseparably blended with the deep science of feeding, rearing, and fattening all living things on the farm. If we were asked what crop is best cultivated in this country, we should answer that it is not wheat, nor corn, nor tobacco, nor potatoes, but cotton. The cleanest culture in the United States may be seen in cotton fields, which have been properly plowed, hoed, "chopped out," and otherwise fairly attended. Tull chopped out his young wheat with hoes whose blades were only four inches long, having a sharp thin edge. He would be regarded in Western New York as a large wheat grower; and forty years' experience taught him the extreme folly of having a poor pasture in the soil, and too many plants to the square yard. Subsoiling he did not understand by name; but no other agricultural writer ever complained so much and so earnestly of his neglectful plowmen who would not do justice to his wheat beds — stir the earth deep enough and make it fine enough, nor roll it properly between the rows. The surface of tilled ground needs compression, for wheat.

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BARN-YARD MANURE.

The liquid and solid excrements of animals contain all the elements of plants in a state best suited for assimilation, and the great practical question of the farmer is how to preserve them without loss and apply them to the land in the best condition. Our present system of barn-yard management is most objectionable; by it the greater part of the liquid excrements are lost, and by injudicious fermentation a large quantity of the organic gases escape, and the soluble, and consequently most valuable, portion of the manure is washed away by drenching rains. These three evils every one familiar with farm management must have observed. The loss to the individual by such a reprehensible practice is great, and, viewed as a national evil, is most appalling. The direct loss to the farmers themselves, in the aggregate, is immense; while the indirect loss to the country is positively inestimable.

No farming can be profitable where the manure is thus shamefully wasted; nothing being plainer than that the crops of the farm and the profits of the farmer are in direct proportion to the amount and value of the manure made on the farm. The great aim of the farmer in the management of barn-yard manure, should be—first, To preserve all the liquid; Second, To keep up a slow fermentation, never letting the heap heat or ferment violently, and thus throw off its ammonia: Third, To prevent leaching during heavy rains and melting snows.

The first is perhaps the most difficult; and tanks for the reception of the liquid are often recommeded and adopted by first rate farmers, and we wish there was a good tank in every barn-yard in the land; yet we think that much may be done by covering the bottom of the yard with dry peat, muck, saw dust, waste straw, potato vines, and numberless other absorbent substances which can be found on most farms, and which, valueless in themselves, can thus be made into enriching fertilizers. If this be done and the yard be kept constantly supplied with waste straw, the heap will absorb all the liquid of the animals and what may fall in rain on its surface. If it will not, a tank, or water tight pond, should be placed in a convenient place in the yard and the superabundant water of the rainy season be preserved for pumping back on the heap in a dry period. If this liquid be kept saturated with sulphate of lime, or refuse common salt, it will be of great value to the manure, inasmuch as plaster will, in its liquid state, change the volatile carbonate of ammonia into the fixed salt, sulphate of ammonia.

The second object, or keeping up a gradual and not too rapid decomposition, is very easily attained. If horse or sheep manure be thrown up loosely, so that there is a free admission of air and moisture, rapid and most injurious decomposition takes place with the evolition of ammonia, carbonic acid, and water. This burning process (for it is nothing less than a slow process of actual combustion) may be allowed to go on till the heap is greatly reduced in size, and what is left be comparatively worthless. On the other hand, if the hog and cow manure be thrown in a solid heap, little or no decomposition takes place, and the manure remains in a raw and unsuitable state for direct application to rapidly growing plants. The object of the farmer, therefore, should be to mix these several manures together, so that the horse manure, &c., shall act as a ferment, and induce the desired decomposition of the hog manure, &c. In this way they will counteract each other, and the heap by spring will be in first rate order for direct application to the corn, potato, or other crops. Sheep do not like to lie on a fermenting manure heap. They should, if possible, have a separate yard to run in at night, and the manure they make be hauled to the heap as often as practicable, fresh straw being suppplied in its place. It is generally necessary that sheep and cattle should run on the manure heap so as to compress it and prevent too rapid fermentation.

The third condition necessary to preserve the valuable elements of manure is to prevent leaching. This can be accomplished by having all the buildings round the yard spouted, and the water conducted away without falling on the manure. If this is done, the water falling on the natural sarface of the heap will not usually be more than the manure can absorb; if it is, as we have before said, it should be preserved—saturated with plaster and conveyed back to the heap in dry weather.

We believe if these three conditions were attended to in the manner we have mentioned, or in some other way better suited to individual situations, the value of the manure on most farms would be at least doubled.

In conveying the litter from the stable, cow-house, and pig-pens, a good large farm yard wheelbarrow is absolutely necessary. Indeed, we think a wheelbarrow is one of the most essential vehicles to the proper management of a well-conducted farm establishment—a one horse lifting cart standing next in our estimation. Both are needed to perform much necessary work in the most economical manner.

We have said nothing about the condition in which it is best to apply manure, whether in a fermented or unfermented state, about which there is much difference of opinion, not only among chemists, but among farmers themselves. There is necessarily a loss during the fermenting process; but if it is confined to water and carbonic acid, the loss to the farmer is of little or no consequence. And if the heap is managed as we have directed, and especially if saturated solutions of plaster are frequently pumped and re-pumped on the heap, little of the ammonia need escape. In such a case the more the heap is reduced by fermentation, the less labor will be required to haul and spread it; while from its concentrated *soluble* character (for many of the mineral substances are increased in solubility by fermentation with organic matter) it acts much quicker, and with more effect, on spring crops than though applied in the green state.

On heavy clay soils it is often advantageous to apply the manure in the green state, the carbonic acid generated by the fermentation of the litter in the soil assisting materially the solubility of silicates and other nearly insoluble salts. It increases, also, the porosity of the soil, and thus benefits it mechanically as well as chemically.

IMPROVED SUPERPHOSHATE OF LIME.

Most of our readers are probably aware that the Royal Agricultural Society of England offered some months since a premium of $5,000 and a gold medal for a chemical manure which shall be equal in value to Peruvian guano, and which can be afforded for $25 per ton, gross.

In the August number of the *Farmer* we mentioned having received two articles of superphosphate of lime made in New York, one under the direction of Prof. Mapes, editor of the *Working Farmer*, called "Improved Superphosphate of Lime;" the other by Deburg, called merely "Superphosphate of Lime." We there gave our opinion of their respective value as compared with each other, and with Peruvian guano, thinking that Deburg's was the better article as a manure for turneps and other root crops, but that for wheat, corn, and other cereals, Peruvian guano was very much superior to either.

This "improved" superphosphate of lime has been advertized in a great number of the agricultural papers, and many of our brethren, from confidence in Prof. Mapes' integrity, knowledge, and skill, as one of our first agricultural chemists, have, probably without trial or good evidence, recommended it to their readers. We hold it most important that at the present time, when there is evidently an awakening interest in scientific investigations, and the recommendations of chemists, that everything that will in any way mislead the farmer, or that will give him exaggerated ideas respecting the value of any chemical compound when applied to his crops, should be fearlessly exposed.

Prof. Mapes, in the November number of his paper, after noticing the premium above mentioned, says:

> "The Royal Society may offer this premium with impunity, so long as the prices of bones, sulphuric acid, and ammonia shall remain as they now are. Long experience has now taught the English farmers that superphosphate of lime and sulphate of ammonia, when properly prepared, is worth nearly twice its weight of Peruvian guano; and attempts have been made to manufacture an article containing these requisites in proper proportions, and in a dry form, at £20 per ton, at which price it could readily be sold, but the high price of phosphate of lime and of sulphate of ammonia, has rendered this impossible, and the Royal Society may offer their premium fearlessly, until it can be proved that crops may be grown from other substances than those contained in them as proved by analysis.
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> "The Improved Superphosphate of Lime, used by us for the last five years, and now made for sale at $50 per ton at New York, cannot be duplicated in England for double that sum, and if it could, to our certain knowledge it would be done, and would soon take precedence of Peruvian guano at the present prices.
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> "Even the American native phosphate of lime is selling in England at £7 ($35) per ton, in large masses, the grinding of which to a powder is attended with large expenses, and even when ground it is useless as a manure, until treated with half its weight of sulphuric acid, thus rendering the prepared article in a perfectly dry state, costing much more than the cost of the Improved Superphosphate of Lime, which, from the absence of ammonia and many other of the constituents of guano, it is very far inferior to it in quality. It will readily be perceived that the Royal Society will not soon be called upon to pay over the £1000 so liberally offered."

We have had some considerable acquaintance with English farmers, and have always considered them by no means an intellectual class of men, but we never thought them such fools as the above hypothesis of Prof. Mapes makes them. If "long experience" has taught them that phosphate of lime and sulphate of ammonia, in the proper proportions, are worth twice as much as Peruvian guano, why do they buy upwards of 151,000 tons of guano a year and pay $45 per ton for it, when they can buy burnt bones, or animal charcoal for $18 per ton, and sulphate of ammonia for $60; for we presume "the proper proportions" of Prof. MAPES would give much more of the phosphate of lime than of the sulphate of ammonia, so that this manure, of phosphate of lime and ammonia, could be made for less money than the guano. And if long experience has taught them that it is worth twice as much as guano, it is surprising that they use so much guano and so little of the mixture—so little, indeed, that we have never heard the manure mentioned. The assertion that such a manure "sold readily" at $100 per ton, but cannot be made for that sum, is most certainly a mistake.

Muriate of ammonia sells readily at $100 per ton, and from the high per centage of ammonia it contains, it is a cheap manure at that; but an addition of phosphate of lime would *reduce its value* in exact ratio as it was mixed with it. That this is the case, is most obvious from the fact that ammonia cannot be purchased in any portable form for less than twelve cents per pound, whereas phosphate of lime can be obtained in unlimited quantities as a mineral phosphate for less than one cent per pound, and in animal charcoal for thirteen mills per pound, and the price is gradually falling—large quantities, the refuse of beet sugar manufactories, which are now in a very flourishing condition, being sent over from Germany and France.

Sulphuric acid can be purchased in London for less than half what it costs in New York, and sulphuric acid is *the expensive ingredient* in the manufacture of superphosphate of lime. Such being the facts, what becomes of Prof. MAPES' assertion that his improved superphosphate of lime cannot be duplicated in England for less than twice its cost in New York.

According to an analysis now before us of "MAPES' Improved Superphosphate of Lime," by THOMAS ANTISELL, M. D., New York, it appears that 53 lbs. in the 100 of this manure consist of burnt bones or animal charcoal *little acted on by the sulphuric acid*, the value of which, in New York, would be about $10 per ton; the other 47 lbs. contain about 22 lbs. phosphate of lime, 8 lbs. sulphuric acid, half a pound epsom salts, 4 lbs. water, 3 lbs. lime and silica, and 10 lbs. organic matter and alkaline salts soluble in water. If such is the composition of the "improved superphosphate of lime"—and judging from the appearance of the article, we have no doubt of the correctness of the analysis—to say that such a compound cannot be made in England at $100 per ton, is at best supremely ridiculous. We think we could manufacture such an article there for $30 per ton and realize a handsome profit at that; though we doubt the possibility of selling it for $20 per ton, unless, indeed, we started an agricultural paper and devoted its pages to puffing the stuff. And, even in that case, we should need a *new* list of subscribers each year; for though English farmers are not very bright, they do not patronize the same humbug more than once.

In another part of the same number of the *Working Farmer*, Prof. MAPES, speaking of the large orders received for this manure this fall, says:

> "The old wheat districts are again profitable where the Improved Superphosphate of Lime has been applied; all agree with our former statements, that 500 lbs. of the new manure is as effective as 40 half cords (two-horse wagon loads) of well rotted stable manure, while its cost does not equal the mere expenses of handling the barnyard manure."

We have repeatedly advised our readers to make as much manure on their farms as possible. If they have done so, it appears it will be good economy to give it to some of their unscientific, book-despising neighbors, and send to New York and get 500 lbs. of "MAPES' improved phosphate of lime" to supply its place. Verily, this great discovery bids fair to revolutionize the established practice of agriculture.

"THEORIES EXAMINED AND EXPLAINED."

MR. LEVI BARTLETT, the associate editor of the *Boston Journal of Agriculture*, in a reply to our remarks on his series of articles headed "Theories Examined and Explained," thus writes in the November number of the *Journal:*

"Mr. KING:—Last evening I received through the Post Office, the October number of the *Genesee Farmer*, which some one has kindly forwarded to me. The paper contains some severe strictures on two or three communications I have furnished for several of the last numbers of the *Journal*. The article in the *Genesee Farmer*, I presume, was written by Dr. LEE, one of the editors of that paper. I regret that he did not wait till I had concluded the series, before he *reviewed* it. Perhaps if he had done so, he would have been better prepared to judge correctly, whether I am so very heterodox upon agricultural matters. He commences his review by heading it 'Theories Examined and Explained,' and then says, 'such is the comprehensive heading of a series of articles, which Mr. LEVI BARTLETT, of Warren, N. H., is writing for the Boston *Journal of Agriculture*.' I gave no title to my commnications, but the editor of the *Journal of Agriculture* headed it 'Theories Examined and Explained,' and is undoubtedly able to give sufficient reason for so doing, if he thinks proper to do so. This, then, is the 'whole head and front of my offence,' in reference to this 'comprehensive heading.'

"I have not time now to reply fully to the criticism of the *Farmer* on my articles; but from its tenor I think the writer entirely misjudges my views. He seems to suppose me strictly an advocate of the mineral theory, and opposed to the nitrogenous system; and that I am calling in question the correctness and utility of Mr. LAWES' expensive and valuable experiments. If so, he, or any one else so supposing, labors under a great mistake. My object in writing these—what the reviewer, in the height of his courtesy, terms—'gassy articles,' is not to build up or put down either of the above named theories. After many years of reading and observation, joined with unremitting labor on a farm, I do not find myself wedded to either system to the exclusion of the other; nor have I ever blindly written in favor of one side of the question, forgetting the merits of the other. In the course of my agricultural reading, I have come across a great many contradictory statements as to the results of different experiments, from the use of different manures, and also from the use of the same kind of manures on different soils. These diverse results, in connection with the contradictory opinions among scientific agricultural writers, are sorely puzzling to the great mass of working farmers, and serve rather to foster their prejudices than to throw light on their calling. Now if any correct explanations of these apparent discrepancies are ever to be made, it must be done by scientific investigations. In beginning the series alluded to, it was my great aim to reconcile, as far as possible, some of the 'vexed questions' of farming;—to explain them in such a manner as every farmer could understand them;—and thus to do away with much of the opposition against the application of science to agriculture. How far I may succeed in accomplishing said objects, I shall cheerfully leave to the good judgment of the readers of the *Journal*. The reviewer says I promised to bring forward facts and statements to support the mineral theory. Again he says, 'in number three of the series of letters, we have repeated assertions, but none of the promised experiments or facts.' Had he waited till the publication of my October number, he would have found some of the experiments reported; and for aught I know, Profs. DAUBENY, LINDLEY, ROGERS, HENSLOW, &c., are entitled to full credit. Having a few more facts of the same kind on hand, I shall bring them forward, not, however, for the purpose of attempting to kill the ammonia theory. If the reviewer will turn to page 69 of the *Journal*, he will find that I am as strong an advocate of ammoniacal manures on *some* soils, and for *some* crops, as he is himself.

"The reviewer says, 'that neither LIEBIG nor Mr. B. appear to have read the pamphlets written by Mr. LAWES' himself but have taken up their able pens to refute what they have obtained only at second hand.' Again he says, 'as our article on plowing in green crops appears to be the source of Mr. B.'s information, why does he not attempt to refute the positions there maintained by us and not attack Mr. LAWES?' I did not attack Mr. LAWES, or undertake to refute the correctness of his experiments or statements, or even to express a doubt thereon. My sole object, in writing the articles in question, is, as I have said before, to attempt to reconcile some of the disputed points in agriculture.

The term "gassy" was applied to the articles of a well known class of agricultural writers who do nothing but write, in contradistinction to those who investigate the laws of nature in the field and laboratory, and not in any way to Mr. BARTLETT's articles. We have usually read Mr. B.'s communications with great pleasure, and were not a little surprised and sorry that he had joined sides with the "mineral manure theory" advocates, as we most certainly thought was the case from the tenor of his "Theories Examined and Explained." We are, however, glad to find that we were mistaken, and that Mr. BARTLETT is "as strong an advocate of ammoniacal manures on some soils, and for some crops, as" ourselves.

Mr. B. has written four successive articles on this subject. The first was in reply to an article by R. M. Copeland, of Boston, who thought mineral manures were not of so much consequence as ammoniacal ones; the other three articles have all been in reference to Mr. Lawes' experiments, or at least to a few results of his we gave in our article on "Plowing in Green Crops." That this article was the object of Mr. Bartlett's criticism, we had good reason to suppose from the fact that he quoted our summary statement of the results of these experiments, and adopted portions of our *language* in reference to their application to common farm practice. Besides, we stated some facts connected with the experiments, which have been published no where else; and these, too, Mr. B. mentions. Would it not have been more consistent with Mr. Bartlett's deservedly high reputation and scientific attainments, either to have "examined" Mr. Lawes' own account of his experiments, and his deductions from them, before he attempted to "explain" them? Or, if our article was the only source of Mr. B.'s knowledge of these experiments, (as we are forced to believe it was, otherwise he would not have *confined* himself to our account of them,) would it not have been more candid and honorable to have said so?

As the articles now stand, we hardly know what Mr. B. wishes his readers to believe respecting this "vexed question"—whether he coincides with our expressed opinions on the subject, or on what particular points he differs from us. Mr. B. says: "Had he waited till the publication of my October number, he would have found some of the experiments reported; and for ought I know, Profs. Daubeny, Lindley, Rodgers, Henslow, &c., are entitled to full credit." In the October number we find another article "examining and explaining" the few experiments of Mr. Lawes as given by us, and a few others giving, as he supposes, results very different; and engages earnestly in the effort of reconciliation. He first quotes from the late Prof. Norton as follows:

> "Prof. Norton says, 'that during his stay in Edinburgh, samples from more than five hundred cargoes of guano were analysed in the laboratory of Prof. Johnston, and were sold by his analysis, fluctuating in price as they indicated more or less ammonia. Had there been any mistake in this method of estimating value, experience would soon have detected it.'
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> "But notwithstanding the beneficial action of the sulphate and muriate of ammonia as used by Mr. Lawes, and what Prof. Norton and others have said of its importance, there are numerous well authenticated facts on record that prove most clearly that the application of ammoniacal manures is not *always* attended with very marked beneficial effects, and there are also numerous cases where mineral or saline manures alone have produced extraordinary results, notwithstanding their failure on Mr. Lawes' wheat crop. Why such different effects should be produced by the same kinds of manure on different soils, is an important inquiry for the farmer; the only reasonable way of solving the question is by assuming as *facts*, the general principles laid down by Liebig, Johnston, and other scientific writers on agriculture."

If we are to assume as *facts* the principles of Liebig and Johnston, as applied by them to agriculture, there is no further necessity of field experiments, and Boussingault and Lawes have spent their years, strength, and money, for that which profiteth naught; for the results of both of them are contrary to the principles of agriculture as laid down by Liebig and his followers.

But, to the promised experiments. The first is on *turneps*, on which phosphate of lime is found to do as much good as nitrogenous manures.

The second is by a friend of Prof. Lindley, near St. Albans, and is likewise on turneps. "The experiments were made, as all experiments should be, on an exhausted soil." Query: Who was the experimentor? Mr. Lawes' estate is four miles from St. Albans; his experiments on turneps, and in fact all his experiments, were made on an agriculturally exhausted soil; and he is a personal friend of Prof. Lindley. The chief result of these experiments is, that the *ashes* of a given quantity of barn-yard manure gave more turneps per acre than the same quantity of manure unburnt.

The next experiment is to show that the *ashes of wheat* are better manure than guano. The crop to which they were applied is not given.

Another experiment is from Prof. H. D. ROGERS' Geological Report of New Jersey, s follows: "Mr. WOOLEY manured a piece of land in the proportion of 200 loads of ood stable manure to the acre, applying upon an adjacent tract of the same soil his narl, in the ratio of about 20 loads per acre. The crops, which were timothy and lover, were much the heaviest upon the section which had received the marl." There s evidently an error in the *figures;* but we presume the fact that the marl did most ood, is well established.

What, we ask our intelligent readers, do these sundry experiments amount to, as the oundation of agricultural principles; or what do they show, as applied to the subject f discussion? They were tried, not on wheat, but on turneps, and timothy and clover. or turneps and clover we have always recommended soluble phosphate of lime as the est of all manures, and think ammonia unnecessary; that phosphate of lime, or any ther mineral ingredient, does no good when applied to wheat on ordinary wheat soils; ut ammonia, in whatever form applied, whether in barn-yard manure, guano, or salts f ammonia, is of great benefit. The experiments quoted by Mr. BARTLETT corroborate ather than disprove the truth of this proposition.

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BRITISH AND AMERICAN AGRICULTURE.

HE following conversation between two intelligent Western New York farmers, one of vhom has recently returned from a visit to Europe, gives a good account of British arming as contrasted with American agriculture; with other matter that will be found nteresting to the agricultural reader.

A. What most surprised me when first visiting the country in England, was the number and vidth of the hedges, some of them as crooked as a fiddler's elbow, and occupying a rod or two of land, nd in many places thickly studded with trees, or, as they there call them, "hedge row timber," vhich do immense damage to the land. One farmer in Shropshire, when mentioning my surprise to im at this, said that many of the landlords objected to the tenants removing these crooked old edges for fear of disturbing the game for which they afford an admirable shelter. He pointed me o a field of his, of six acres, around which there was a hedge and ditch at least a rod and a half wide, nd in the hedge there was eighty-five large trees, which did great damage to the crops. The same armer told me that the game did him at least $500 damage a year on a farm of 250 acres. He omplained most bitterly of Free Trade—said it was ruining the farmer, and that he was now losing noney by farming, but that his landlord had promised to destroy the hares and rabbits, which do he principal damage, and to remove the hedge row timber; but nothing could give them such imes as they had under protection, with wheat at an average of $3 per bushel, and barley and other rains in proportion. The difference in the language, customs, and farming of even adjoining counies, perfectly astonished me. The farmer above alluded to said that when ELIHU BURRITT, the American 'learned blacksmith," was lecturing in that neighborhood, he was one day speaking to his men of he many languages this working man had acquired, when a good old familiar servant, who often eld forth as a primitive Methodist preacher, said that he knew two languages. His master, a little urprised, wished to know what they were; he replied, "Shropshire and Cheshire,"—two adjoining ounties. Some twenty years ago, it is said that the judges at the assizes in the county of Lancashire vere under the necessity of employing an interpreter before they could understand the language of he witnesses. The difference in farming operations is equally striking. In some counties you will ee three, and sometimes four horses, one before the other, drawing a single plow, with a man to hold nd a boy to drive—an acre being considered a good day's work. In another county, "double lows," or plows that take two furrows at once, are commonly used. If the land is heavy, or they vish to plow deep, five horses are attached to it *in length.* When plowing for barley in the spring, n light soil, four horses only are used, and they will plow from two to three acres a day. The plow vill run itself, so that one man only is required; he does nothing else but attend to his four horses, enerally commencing work at six o'clock in the morning, has a lunch and beer about ten, and leaves off work for the day at three in the afternoon. In other parts, however, they abandon system altogether, and plow, harrow and cultivate as we do here, with two horses abre called the improved system of farming, and is rapidly being adopted all over the count

B. Your account of English agriculture differs vastly from that given by many of on the subject. I have always understood that England was the garden of the worl farmers were reading men and farmed on scientific principles.

A. Many parts of England and Scotland well deserve the name of gardens. The fa you say, men of education and fortune, and farm in a style far exceeding any anticipati would lead us to indulge. The beauty of the landscape, large fields divided by straigh trimmed hawthorn hedges with occasional shade trees, the luxuriance of the crops, perfe breeding of horses and all other domestic animals, the thorough system of under-dra beautifully arranged, substantial homesteads, with steam threshing and other machines, filled "stack-yards," and the neatness and system with which everything is done, con involuntary admiration. Yet while this is so, the great mass of English farmers are b such an intelligent, industrious class of men as the farmers of this country. They expend capital and labor on the land than we do, and get much larger crops, yet I by no means they can raise a bushel of wheat, or a ton of clover, for a less sum than we can.

B. How is it that they obtain such large crops? The climate I have always understo good as that of this country. It would seem that possessing our own farms, having n hedge row timber to trouble us, few taxes and no rent and tithes to pay, no restrictions mode of farming, being in short lords of the soil, we could raise better crops than the Eng

A. In regard to our climate being so much better for agricultural crops than that of have considerable doubt. It is true our Genesee wheat is much superior to theirs, being h plumper; yet their barley is much better than ours, weighing on an average 56 lbs. to t whereas ours here seldom goes over 45 lbs. Their growing season is much longer and c ours, and the climate is most admirably adapted for the culture of roots, clover, and the English perennial grasses. It is the culture of these crops that places their agriculture so of ours.

B. You think then that our climate is better adapted for the growth of wheat and theirs for the growth of clover and other green crops.

A. They do not raise such heavy crops of red clover as we do here. Many farmers tol could not raise red clover once in four years, and substitute trefoil, white Dutch, and othe of clover and grasses in its stead, sowing the red clover once in eight years, and on the lig soils once in twelve years. We can beat them altogether in growing clover. But it is t *crop* that lies at the foundation of England's agricultural glory. It is generally admitted t nutritious matter can be obtained from an acre of land cultivated with Mangel Wurtzel, R or common turneps, than from any other crop; and the climate of the British Isles is, perha adapted to their growth than that of any other country.

B. I do not clearly see how it is that the cultivation of turneps can make such a vast in the agriculture of the two countries as to make theirs so much superior to ours. If ou and soil will grow better wheat and clover than theirs, we can easily dispense with turn consider clover the most valuable and the least exhaustive crop we grow. If I get a goo clover I make sure of good wheat after it.

A. Just so, you get a good crop of wheat after plowing in a growth of clover, because t has attracted fertilizing gases from the atmosphere and organized them by the aid of miner from the soil. These when plowed in, or if the roots only are left, decay and furnish just in a fit state for assimilation, the wheat plant requires. This is eminently the case with clo the same thing is obtained by the English farmer, to a much greater extent, by means of hi crop, than we can with clover, and in this respect he has the decided advantage of us; that he can obtain more food per acre from his turnep crop than we can from any crop grown h can consequently keep more stock on his farm, and make more manure, thereby increa available food for plants, or, so to speak, have a greater amount of floating capital at the di the plants.

B. You wish to make it out then that the superiority of British agriculture is not owing to science, or to their superior manner of cultivating the soil, but to the possession of a clim suited to the production of large crops of turneps.

A. There are a great many scientific farmers there who are deserving of great credit for the number of experiments they try, and which serve to bring to view great principles in agricultural science; yet I think that the immediate cause of their growing larger crops of wheat and other grains than we do, is to be ascribed to the turnep crop and to the higher prices they even now command for meat, which enables them to purchase from us such large quantities of oil-cake to be consumed on their farms in its production:

B. It is no wonder that they have good crops if they grow such large quantities of turneps and grass, and buy oil-cake to eat with them, as well as large quantities of guano and other artificial manures. I guess our Western New York land would produce as well as theirs, if treated in this way.

A. I have not the least doubt that if we were to keep as much stock and manure as highly as the English farmers do, we should obtain, with our superior climate, for the elaboration of grain, at least fifty bushels of wheat to the acre, and one hundred bushels of *shelled corn* would be considered a poor crop. It is the general impression among farmers in England, that we raise much larger crops of wheat than they do. In fact, they have the strangest notions respecting us you can possibly imagine, and I believe the mass of the people who are certainly in love with our democratic institutions, think more of us than we are strictly entitled to. Everywhere I found myself an object of interest and was treated with marked respect and attention. I passed the greater part of my time in the country and thoroughly studied their most approved systems of farming, and by no means regret the time and money the journey cost me. I was most pleased with the farming of Norfolk. Some fifty years since it was nothing but a drifting sand. It is now the best farming county in Great Britain, producing more meat and grain per acre than any other.

But it is now getting late and I will have another talk on the subject some other night.

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PEA CULTURE IN INDIANA.

We have repeatedly recommended peas as one of the best crops that farmers can grow in rotation with wheat. They exhaust the soil little, if any, of those substances which wheat plants specially require; while the consumption of the pea and vines on the farm makes the manure of great value for wheat and corn. The great drawback to pea culture is the pea bug, though, as we recommended in the September number, if the peas are grown for feeding hogs, they may be all consumed before the bug does much injury. A gentleman in this neighborhood, at our recommendation, sowed four acres of the common white pea, and four acres of the Scotch grey pea, last spring. He had an excellent crop, the Scotch grey being somewhat the best. At harvest time there was not a bug visible. They were in excellent order when put in the barn. They have just been threshed, *and the bugs have eaten nearly all of them.*

The following interesting article from the *Indiana Farmer*, by I. D. G. NELSON, Wayne Co., Ind., shows that our western readers are wide awake and willing to try any experiments suggested to them. In the May number, page 142, we recommended late sowing as a preventive of the pea bug. The following experiments are to the point:

"Knowing something of the pea as a field crop when I was a boy, residing in the State of New York, where it is extensively grown, I determined some three or four years ago to make the experiment here. I found the seed scarce, and was obliged to purchase in small quantities of three different persons—sowed each variety, as I supposed, by itself, but found when ripening all mixed, some 'dead ripe,' others scarcely out of bloom. The yield, as you may well know, was a poor one, and the pea bug rendered worthless, or nearly so, those that I did raise. Not entirely discouraged, however, and not distinguishing among them the variety, as I thought, that is familiarly known in New York as the Canada field pea, I sent and obtained from J. P. Foss & Co., Rochester, N. Y., the pure seed.

"Then the depredations of the pea bug, that is so fatal to its cultivation, nearly everywhere haunted me; but having read 'a long, long time ago,' in the *Genesee Farmer*, (a paper that I have always taken since it was established, some fifteen years or more ago,) that to prevent the depredations of the bug, peas should be sown after the 10th of June, I made the experiment; sowed one half 1st of April, the other half 10th of June. 'Book farming; eh!' exclaimed a friend to whom I explained what I had been doing. 'It's all in your eye—the only reason why your peas will not be stung, will be because there will be no peas to sting.' Now for the result; those sown in April produced somewhat the largest crop, but were literally alive with bugs; those sown in June entirely free from them. Determininig to test the matter further, and not having more seed than I wished to sow, I experimented further the following season, '51. I put all the peas together and sowed them promiscuously, bugs and all—a small portion the 1st of April, the remainder the 8th of June, side by side. The result about the same as the previous year—the April sown peas rather the greatest yield but full of bugs; those sown in June entirely free from them. Satisfied with the experiment, I sowed several acres this season, the 10th of June. I have just gathered them, and find no marks of the sting of the insect; the yield is much the largest I have ever had.

"My method of cultivation, is to prepare the ground well and sow about three bushels to the acre. I intend to experiment further next year, by sowing four bushels. I am inclined to think they will stand up firmer and yield more. I observe this season that uniformly where they stood thickest on the ground, they stood up better and looked finer. Yield from fifteen to twenty bushels—this year somewhat more. They should be gathered when fully ripe. Mow them with a scythe, in dry weather. Avoid rain if possible, and get them in the barn. If there is no mow room, thresh out immediately, clean up as soon as threshed, and give them the benefit of the barn floor a few days until they are perfectly dry, as they will heat if put up in bulk. I lost some in that way last season. The straw should be saved, as it is better for stock than wheat straw or poor hay.

"Next, as to the use and value of the crop, which is the important part of the subject. The uses are various; as food for stock it is highly valuable and profitable in the Eastern States, but whether it will prove so here or not I am not sufficiently posted up to speak definitely, but am inclined to think not, in our great corn districts. If I should raise them for that purpose, I should sow earlier, as the bug does not materially affect their value if fed immediately, and the yield is rather larger. They give hogs a fine start early in the fall immediately after the stubbles are exhausted, by fencing off and turning in, or cutting—feeding vines and all. A little later, and before corn is fit to feed, they may be boiled with pumpkins and potatoes—indeed, if properly managed, but little or no corn will be required to make fine pork. It is thus profitably managed elsewhere and I can see no reason why it may not be here. * * * * * * * * *

"The result of my experience, then, in the raising of peas amounts to this: Those that I raised last season were the first I sold. The product of the April sown peas were alive with bugs, and to prevent them from emigrating, fed them to my hogs. Those sown in June sold freely at two dollars per bushel, and I could not supply the demand; bnt what added peculiar interest to the matter was, that two bushels were sold to the person who thought that raising peas free from bugs was 'all in your eye.'"

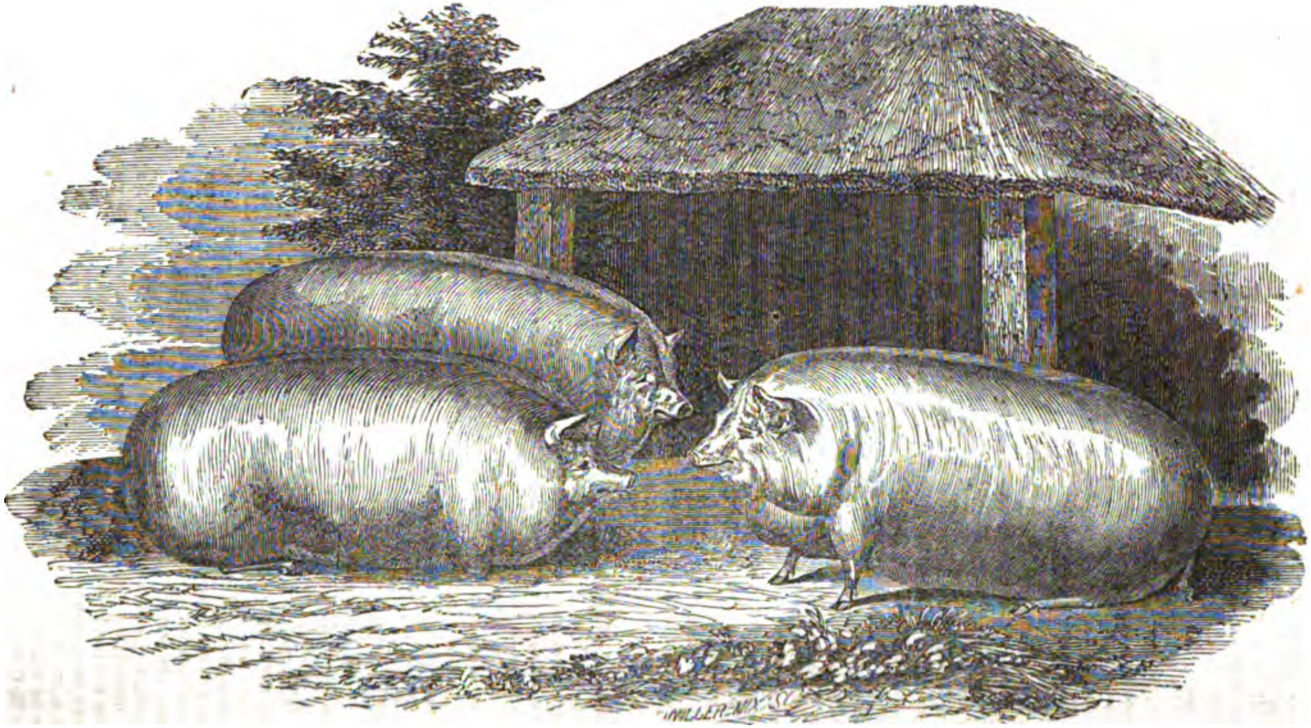
Guano on Potatoes.—Last spring I planted four acres of potatoes on a two year old sod; the soil was a very light gravelly loam, well calculated to raise *sound* potatoes, but as it had been hard run, and never manured, it could not be expected to produce a large crop. I plowed the land deep and well, as early as the weather would permit, letting it lie till the time of planting—May 10th. It was then dragged, and on two acres 600 lbs. of Peruvian guano were sown broadcast. The land was then furrowed out in rows about three feet apart and potatoes planted in the rows, from twelve to fourteen inches between the setts. On the remaining two acres no guano, or manure of any kind, was applied, though treated exactly alike in every other respect.

As soon as the plants were up there was a decided difference visible. The guanoed ones having a richer, darker hue, which they maintained throughout the summer. In the fall, when the unguanoed potatoes were quite ripe and the vines dead, the guanoed ones were growing luxuriantly, the vines covering the whole space between the rows.

The potatoes were dug the last week in October, and accurately measured. On the unguanoed two acres, there was 238 bushels, and on the two acres guanoed, 410 bushels, making a difference in favor of the guano of 86 bu. per acre. All the potatoes are perfectly sound and good, but the guanoed ones are much the largest, with scarcely a small one among them. The guano cost in New York two and a half cents per pound; freight, breaking the lumps, sifting, and sowing it, would make its cost on the land three cents per pound, or $9 per acre. The 86 extra bushels of potatoes will more than pay for the guano, &c., and leave a good profit from the investment.

As regards the best mode of application, I may state that in another field this year I had an acre of potatoes, part of which were guanoed, as on the other two acres, by sowing broadcast, planting the potatoes in hills. On part of the acre the guano was applied *in the hill*, placing the guano immediately over the potatoes, separating them with a little soil, otherwise it would injure the sett. The potatoes thus treated were *much better* than where the guano was sown broadcast. Four rows left unguanoed were not more than half as good as where guano was applied.

I consider guano a most powerful and valuable manure, though whether it will pay as well to apply it to wheat, corn, or other grain crops, as it has in this instance to potatoes, I cannot say. I have sown some on wheat this fall and can already see how far it extended, the difference being very perceptible. H. C. Ives.—*Rochester, N. Y.*, 1852.



IMPROVED MIDDLESEX PIGS

BRED AND FED BY MR. WM. MILLS BARBER, OF UXBRIDGE, ENGLAND, FOR WHICH THE FIRST PRIZE OF $50 WAS AWARDED, AND THE SILVER MEDAL, AT THE SMITHFIELD CATTLE SHOW.

MIDDLESEX HOGS.

Less, perhaps, is known in regard to the respective feeding qualities of different breeds of pigs, than of most other farm stock. We have had something approaching to a series of accurately conducted experiments upon the fatting qualities of different breeds of sheep, and also sundry, if not systematic, experiments on the fatting and milking properties of the principal breeds of cattle, such as the Short Horns, Devons, Ayrshires, Herefords, &c.; but we are not acquainted with one single experiment, that is comparative or satisfactory, in relation to the amount of meat produced, from a given quantity of food, by the various breeds of hogs. There are innumerable single experiments, but when we come to compare them we find that the animals were of different ages, fed on different food, and in short were differently treated in every respect. The results of course are very different. There would be "magic in the figures," could we trust them, and startling theories might be based thereon. There is always a certain degree of truth in the opinions of practical men, founded as they are on long experience, yet it would be interesting to every intelligent farmer to *know certainly* whether these opinions are true or not, and this can only be known by a series of experiments. It is supposed by many practical farmers that the small breeds of hogs will lay on more fat for the amount of food consumed than the large breeds. A carefully conducted experiment would settle the point. Who will make it? All the valuable English small breeds of hogs have been greatly improved by judicious crossing with the Chinese and Neapolitans. The Suffolk, Essex, Middlesex, and Berkshires, have all more or less Chinese and Neapolitan blood. All of them possess many valuable points, and are respectively best adapted for particular objects. For early maturity, rapidity of fattening, and small proportion of bone and offal, the Middlesex breed is, in our *opinion*, second to none.

The accompanying engraving represents three beautiful specimens of this breed, as exhibited at the Smithfield Club Cattle Show. "They were farrowed on the 18th of June, and were fed, from five weeks' old, on middlings, boiled potatoes, and peas, up to eleven weeks' old, when they had barley and pea-meal, and boiled potatoes, mixed with water. They consumed in thirteen weeks, twenty-eight bushels of meal and four bushels of potatoes. They were tried on milk, but did not thrive so well on it as on water. In consequence of their great propensity to fatten, they were blind with fat at sixteen weeks old, and when exhibited their eyes were buried two inches in fat, which came over their forehead and lay on the top of their noses full three inches.

The following is a statement of their weight and age while fattening:

Date.	Weeks old.	First.	Second.	Third.	Mean increase per week.
July 22	5	24 lbs.	24 lbs.	20 lbs.	
August 18	8	52 "	44 "	42 "	7⅓ lbs.
September 8	11	80 "	72 "	64 "	8⅓ "
Ditto. 24	14	104 "	96 "	88 "	8 "
October 15	17	152 "	144 "	132 "	15⅓ "
November 5	20	200 "	192 "	192 "	17⅓ "
Ditto. 26	23	232 "	224 "	224 "	10⅔ "
December 6	24 and 3 days.	232 "	224 "	224 "	

This breed of pigs has been much improved by Mr. Barker (the exhibitor) in the last seven years. They are of a pure white color, of great substance and propensity to fatten. They keep in excellent condition while stores on grass, turneps, offal from the barns or garden, and when put up to fat, in two or three weeks make excellent porkers. They are fine in the bone and head; small upright ears, which point a little forward. They are of a small size, have good litters, varying from seven to fourteen in number, being very fat while sucking, and thus making very good roasters.

Horticultural Department.

CONDUCTED BY P. BARRY.

OUR NATIVE TREES.

All at once there appears to have sprung up a very unusual appreciation of the beauty of our native trees. In half a dozen publications, issued at widely distant points, we find their eulogies set forth in the most glowing and enthusiastic terms. This is one of the most striking evidences of the growth of *real* taste that we have yet met with in all that has been said and written on horticultural subjects. As long as the riches and beauty of the sylvan treasures that nature has so unsparingly scattered over our own land, and around our own homes, remained unnoticed and unadmired, so long would it be indeed a most hopeless task to attempt to promote improvement in that department of horticulture which depends entirely upon taste. It is quite impossible that any one should be possessed of what is called taste, as relates to landscape or gardening, without having *felt* the grandeur and the beauty of our natural plantations and landscapes. What use would it be to talk of the artistic beauties of an English park, to a man who had lived his life time in the beautiful valley of the Genesee without seeing anything to admire in its charming landscape—its noble forests and broad meadows, blended with a skill that mocks man's puny efforts;—a man who had passed up and down the Hudson river a thousand times without feeling a single impression from its grand and picturesque scenery, the rock-work of which, compared to the artificial rock-work of the landscape gardener, is as a child's toy compared to a genuine gothic castle, or an outlet of a mill dam to the falls of Niagara. It is idle to describe the beauties of a *Deodar Cedar* to one who has not comprehended the grace and beauty of the Hemlock Spruce that grows by his door, or to talk of the lofty Pine of the Himalayas to one who has never looked upon our noble White Pine with admiration. The cultivation of rural taste, like the exercise of that greatest of virtues, charity, should "begin at home." Until we learn to love and admire the sweet and beautiful violet that blooms at our feet, it is folly to send to the antipodes for something more beautiful in imagination. We rejoice, therefore, to witness some healthy symptoms of an awakening sense of our native beauties, and to hear of people actually admiring and planting our native trees. We have never heard so many people speak of the beautiful autumn tints of our forests, as we have this past autumn; and this we are happy to note as another strong evidence of the growth of taste. The colors of the dying foliage have been indeed unusually brilliant and striking; but they have been so only to those who have some perceptions of the beautiful, and in whose hearts there is at least the *germ* of the love of nature.

This is a subject on which we would like to dwell, but we must await another opportunity. At present we will make a practical suggestion; for practical we must be, if nothing else.

There is many a good, honest farmer, whose dwelling stands bare as a light-house on an ocean rock, exposed to every wind that blows and every ray of sun that a merciless mid-summer day pours down on its devoted walls and windows. The very chickens can not find a shrub to shelter them, without making a journey of half a mile. Now that winter is upon us, and there are idle men sighing for something to do, and idle horses gnawing their stalls and growing unruly for lack of exercise and labor; go into the woods some fine, mild day, when there is snow enough on the ground to make comfortable sleighing, take up some fine young maples, elms, basswoods, tulip trees, (whitewood,) put them on the sled and transport them to your homes, plant them along the roadsides, and here and there in the vicinity of your dwellings; and in a year or two you will find you have made a wonderful improvement in the comfort of your home and the appearance of your home landscape. Dig good large, wide, and deep holes for them. *First*, have some good loam from the fence corner or the woods, to put about the roots. Take them up with *all* the roots entire, prune the heads lightly, but don't "*pollard*" them; that is, cut off the heads entirely; for that destroys their natural characteristic forms for several years. *Shorten* the limbs only. If evergreens, such as Balsam Firs, Spruces, Hemlocks, Pines, and Cedars, can be had, don't fail to add a few of them.

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PROCEEDINGS OF THE POMOLOGICAL CONGRESS.

The Proceedings of the Pomological Congress held in Philadelphia on the 13th and 14th of September last, have made their appearance in a heavy pamphlet of 168 pages. We are indebted to Dr. W. D. Brinckle, of Philadelphia, for an early copy. This volume surpasses by far any of its predecessors, not only in the quantity, but in the value of its contents; and this value is greatly enhanced by its prompt publication. It opens with the excellent address of the President, Dr. Brinckle; then follow the lists of delegates, showing thirteen States to be represented; then the officers elected for the ensuing year; address of the Hon. M. P. Wilder, the newly elected President, on taking the chair; proceedings in regard to the late A. J. Downing; subjects reported by the business committee for the action of the meeting; Constitution and By-Laws of the Pomological Society; discussions on fruits; committees; lists of contributors of fruits; catalogue of varieties adopted, recommended, and rejected by the Society; reports of State committees; and lastly, the eulogium pronounced by Col. Wilder. The Reports of the State Fruit Committees contain many valuable and interesting facts and statements, which we shall hereafter cull, as leisure permits. We find reports from Maine, Vermont, New York, New Jersey, Pennsylvania, Delaware, District of Columbia, Virginia, South Carolina, Kentucky, Michigan, and Illinois.

The discussions on fruits we had intended to condense, and give a sketch of their substance; but not finding leisure to do so, we shall at present extract entire, as we find them in the report, the discussions on three popular varieties of pears, the *Dearborn's Seedling*, *Duchesse d' Orleans*, and *Doyenne d' Ete*:

"Hon. Samuel Walker, Massachusetts. I will suggest the propriety of cancelling from that list the *Dearborn's Seedling*. I am ready to admit that when you have a fine large specimen, well ripened, it has very few equals, and I was almost about to say, has no superiors. I have found it, however, to be a very small pear as regards the average crop, and not well fitted for the market. My next reason is that it is a very poor grower, and in order to get fine specimens of it, the grafts must be put into large stocks, say from twelve to twenty years old; then it must be very well cultivated. I make these remarks to ascertain the experience of other gentlemen in regard to this pear.

"Mr. S. B. Parsons, Flushing, Long Island. I am sorry the *Dearborn's Seedling* proves so bad near Boston. With us, on Long Island, it is the best pear of the season, although not very large.

"Mr. Hancock, Burlington, New Jersey. It has done very well with me for the last six years; but I find one objection to it, and that is, if you have a large crop, the pears are inferior. For my own section of the country, I hope it will not be stricken out. I speak of New Jersey.

"Col. Hodge, of New York. I have known this pear six or eight years, and have made up my mind to strike it out from my own collection for two years past, and for myself move it be stricken from the list.

"Mr. Hayes, of New Jersey. I have found, from actual experience, that it has been more profitable to raise it for the market, this season, than any other early pear, and I am very much opposed to striking out pears and other fruit until they have been thoroughly tried. I trust it will not be stricken out.

"Mr. Eshleman, of Pennsylvania. With me the *Dearborn's Seedling* in the interior of this State is prolific to a fault, and small, but as good as anything we have of its season.

"Hon. B. V. French, Massachusetts. When that pear first made its appearance in our horticultural rooms I thought it unworthy, but I believe I shall now do something with it. However, I don't think much of any early pear; but notwithstanding, though I voted against its admission, I shall let it remain in.

"Mr. Ernst, from Ohio, thought little of the pear, and said that for worse pears, in his estimation, he had obtained a better price.

"Mr. Barry, of New York. I am quite surprised to hear that the Honorable gentleman from Massachusetts recommends that *Dearborn's Seedling* should be stricken out, for in New York it is a good pear.

"Mr. Hovey, of Massachusetts. I, for one, am opposed to going back, and taking out anything we have already recommended; and I trust we shall not, during this Convention, adopt any one fruit for general cultivation in regard to which there is the slightest doubt. I always am opposed to retrograde motion. The *Dearborn's Seedling* is one of the best small pears, and I feel it my duty to say a word in favor of it. It is a full medium-sized pear, and I have seen specimens from Western New York and Massachusetts, from Utica and Rochester, as large as the average *Seckels* that we see. We had better let it remain just where it is. It ripens on the tree, and does not rot at the core; I therefore trust it will not be removed from this list.

"Col. Hodge, of New York. I am glad to hear good reports of it from different parts of the country, but with me it has proved quite indifferent, and I was glad to hear the Hon. Mr. Walker make the remarks he did in regard to it. However, seeing so much opposition, I withdraw the motion.

"Mr. Hovey, of Massachusetts. I move that the *Duchesse d'Orleans* be added to the list for general cultivation. I know it is a good pear, and will do well everywhere. The pear is well known around Boston, and came from France with a high reputation. It is large in size and delicious in flavor. It is precisely the same as the *Beurre St. Nicholas*, and Mr. Rivers says he considers it fully equal in flavor to the *Bergamot*.

"Mr. Saul, of New York. This pear has proved very good in our locality; but we hardly know enough of it to recommend that it should be brought into general cultivation.

"Mr. Walker, of Massachusetts. I have had the *Duchesse d'Orleans* in my collection for three or four years, and think it should be annexed to the list of pears that promise well; but I have no doubt it will find its way upon the list for general cultivation when better known.

"The President, Hon. M. P. Wilder, of Massachusetts. On the quince it is not a good grower with me; but on the pear it is, and produces a fine and handsome fruit. It has not been with me a great bearer, although I have a pretty fair crop this year, and perhaps enough for the tree. I should judge my experience does not agree with that of Mr. Manning, who has called it a great bearer. But as regards the quality and beauty of the fruit, I think there can be no doubt.

"Mr. Barry, of New York. We have tested it on the quince and pear, and its quality is very fine; and I believe it is going to be one of the finest pears for cultivation. I think, however, it would not be doing the pear justice at the present time to put it on the list for general cultivation, as it is not sufficiently well known for many to vote understandingly in regard to it.

"It was agreed that the *Duchesse d'Orleans* remain on the list as promising well.

"Mr. Saul. I move that the *Brandywine* and *Chancellor* stand on the list as giving promise of being worthy.

"This motion was agreed to.

"Mr. Harvey. I move that the *Doyenne d'Ete* be placed on the list for general cultivation.

"Mr. Ernst, of Ohio. It has proved to be an exceedingly beautiful fruit, and I can cheerfully vote for it as far as my experience goes.

"Mr. S. B. Parsons. We consider it in Flushing the first good pear.

"Mr. Saul. It has proved to be one of the very best small pears.

"The President. I enter into the views of those who have already spoken, but think it will be better on the pear than on the quince.

"Mr. Hancock, of New Jersey. I think it is better on the pear than on the quince.

"Mr. Hovey. It don't make that vigorous tree on the quince that it does on the pear.

"Mr. Walker, of Massachusetts. From such a mass of evidence in favor of this pear, I would hardly venture to say that I differ; but yet I can not be silent. It does not strike me as being so delicious as represented, and on the quince stock it is decidedly a poor grower. It drops its fruit, and it bears rather the reverse character to a first rate grower with me. On its own stock it does better and the fruit is larger; but I think the gentlemen overrate the pear. If my specimens are a fair sample of the fruit, I venture to say that in two or three years hence they will change their views of the matter. I hope the chair will give his opinion in full.

"Hon. M. P. Wilder, of Massachusetts. I have already expressed an opinion, that on the pear stock it is a desirable variety, and the remarks that have been made in regard to it on the quince, correspond with my own experience. It should be picked before the season of its ripening. It comes at a period when there is nothing so beautiful. We have the *Madeleine* at nearly the same time; but I still think it a desirable variety in rich soils.

"Mr. Barry, of New York. The impression we have got is that it is decidedly the best early pear. At Utica, the other evening, there was a small Convention of fruit growers, and they decided, unanimously, that this was the best early pear. It ripens with us before the *Madeleine*, and is decidedly better. It is a splendid grower on the quince, and so it is on the pear, and when it comes off the tree it is full of juice and luscious.

"Mr. Nourse, of Maine. We have had but little opportunity to test in Maine; but it is the regarded as the best pear, and is considered better than the *Madeleine*. It ripens about the same tim

"It was decided that the *Doyenne d'Ete* is worthy of general cultivation."

The following is a catalogue of all the varieties recommended by the Society at i several sessions, for general cultivation and trial:

FRUITS WORTHY OF GENERAL CULTIVATION.

APPLES.

American Summer Pearmain,
Baldwin,
Bullock's Pippin,
Danvers Winter Sweet,
Early Harvest,
Early Strawberry,
Fall Pippin,
Fameuse,
Gravenstein,
Hubbardston Nonsuch,
Large Yellow Bough,
Lady Apple,
Porter,
Red Astrachan,
Rhode Island Greening,
Roxbury Russet,
Summer Rose,
Swaar,
Vandervere,
White Seek-no-Further,
Wine Apple, or Hays,
Winesap,

And for particular localities.

Canada Red,
Esopus Spitzenburg,
Newtown Pippin,
Northern Spy,
Yellow Belle Fleur.

PEARS.

Ananas d'Ete,
Andrews,
Belle Lucrative or Fondante d' Automne,
Beurre d'Anjou,
Beurre d'Aremberg,
Beurre Bosc,
Bloodgood,
Buffum,
Dearborn's Seedling,
Doyenne d'Ete,
Flemish Beauty,
Fulton,
Golden Beurre of Bilboa,
Louise Bonne de Jersey,
Madeleine,
Paradise d'Automne,
Rostiezer,
Seckel,
Tyson,
Urbaniste,
Uvedale's St. Germain, for baking
Vicar of Winkfield,
Williams' Boncretien or Bartlett,
Winter Nelis.

And for particular localities.

Grey Doyenne,
White Doyenne.

APRICOTS.

Breda,
Large Early,
Moorpark.

NECTARINES.

Downton,
Early Violet,
Elruge.

PEACHES.

Bergen's Yellow,
Cooledge's Favorite,
Crawford's Late,
Early York, *serrated*,
Early York, large,
George the IVth,
Grosse Mignonne,
Morris White,
Old Mixon Free.

And for particular localities.

Heath Cling.

PLUMS.

Bleecker's Gage,
Coe's Golden Drop,
Frost Gage,
Green Gage,
Jefferson,
Lawrence's Favorite,
Purple Gage,
Purple Favorite,
Washington.

And for particular localities.

Imperial Gage.

CHERRIES.

Belle Magnifique,
Black Eagle,
Black Tartarian,
Downer's Late,
Downton,
Elton,
Early Richmond, for cooking
Graffion or Bigarreau,
Knight's Early Black,
May Duke.

GRAPES.

Under Glass.

Black Hamburg,
Black Prince,
Black Frontignan,
Chasselas de Fontainebleau,
Grizzly Frontignan,
White Frontignan,
White Muscat of Alexandria.

Open Culture.

Catawba,
Isabella.

RASPBERRIES.

Fastolf,
Franconia,
Red Antwerp,
Yellow Antwerp.

STRAWBERRIES.

Boston Pine,
Hovey's Seedling,
Jenney's Seedling,
Large Early Scarlet.

CURRANTS.

Black Naples,
May's Victoria,
Red Dutch,
White Dutch,
White Grape.

GOOSEBERRIES.

Crown Bob,
Early Sulphur,
Green Gage,
Green Walnut,
Houghton's Seedling,
Iron-monger,
Laurel,
Red Champagne,
Warrington,
Woodward's White Smith.

NEW VARIETIES WHICH PROMISE WELL.

APPLES.

Autumn Bough,
Hawley,
Melon,
Mother,
Nothern Spy,
Smoke-house.

PEARS.

Brandywine,
Brande's St. Germain,
Beurre Giffard,
Chancellor,
Doyenne Boussock,
Doyenne Goubault,

Duchesse d'Orleans,
Duchesse de Berri,
Diller,
Jalousie de Fontenay Vendee,
Kirtland,
Limon,
Manning's Elizabeth,
Nouveau Poiteau,
Onondaga,
Ott,
Pratt,
Paradise d'Automne,
St. Michel Archange,
Stevens' Genesee,
Striped Madeleine,
Van Assene.

PLUMS.

McLaughlin,
Prince's Yellow Gage,
Rivers' Favorite,
St. Martin's Quetche.

CHERRIES.

Bigarreau Monstreuse de Bavay,
Earle Purple Guigne,
Reine Hortense.

GRAPES.

Diana.

RASPBERRIES.

Knevett's Giant.

STRAWBERRIES.

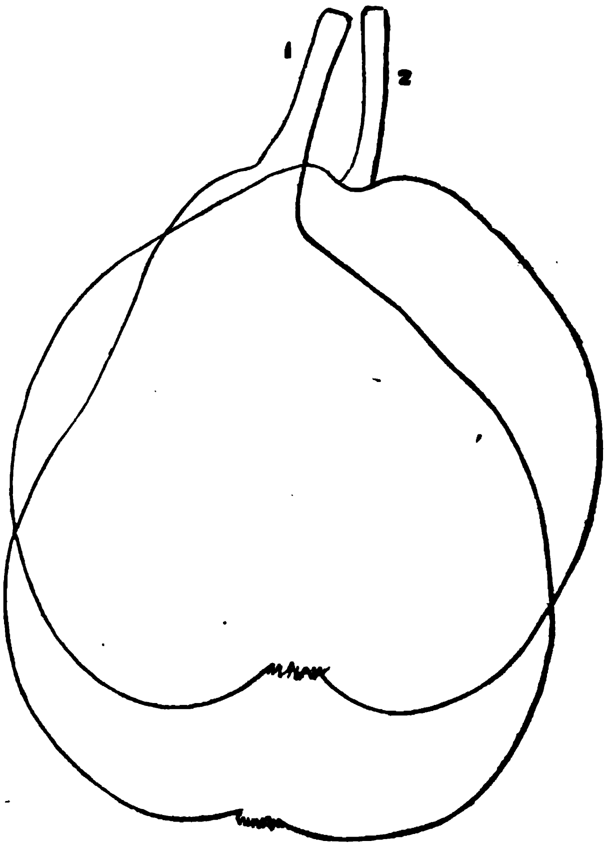
Burr's New Pine.

◆

NEW FOREIGN PEARS.

BY B. DESPORTES, OF ANGERS, FRANCE.

Baron de Mello. (*Adele de St. Ceras.*) Fig 1.—I find this variety in the collection of Mr. André Le Roy, but do not know its origin. It is disseminated under the names of *Baron de Mello*, and *Adele de St. Ceras*; but I think the first ought to be preserved, and we shall adopt that name. *Fruit* medium to large size.—*Skin* clear russet. *Eye* shallow; diversions of the calyx short. *Flesh* yellowish white, half melting, very juicy, sugary, with a slight acidity and a very agreeable flavor. It is a good fruit, ripening in October. The *tree* is of medium vigor, very much branched. *Shoots* long, and of a violet red color, covered with brown dots. *Buds* large, conical.—*Leaves* flat, lanceolate, and almost entire. Remarkably productive.



We will add that this variety has fruited in several collections in this country. We received it from France as *Adele de St. Ceras*, and from Rivers as *Baron de Mello*. we presume the latter will be the generally adopted name. Specimens from our own trees, that were picked for the exhibitions, ripened and were eaten on the 28th of September. Our notes made at that time describe it as "large, greenish russet, becoming a rich cinnamon. *Stalk* obliquely inserted under a fleshy knob. *Flesh* greenish white, juicy, melting, with a sprightly, agreeable flavor. Evidently related to the *Brown Beurre.*" We had specimens sent us by Col. Wilder of Boston, which we cut on the 22d of October. similar in character to our own, but with a less degree of acidity. RIVERS describes it as "a very good, melting pear, equal to *Brown Beurre*, and quite hardy. Succeeds well on the quince, and forms a handsome pyramid."

BEZY GOUBAULT. Fig. 2.—This variety was originated by GOUBAULT, at Angers, some ten years ago. The *tree* is of remarkable vigor, somewhat thorny, resembling in its form and habit the *Glout Morceau*. The *branches* are irregular, with a dark gray bark. *Joints* short. *Buds* very large and prominent. The *leaves* are short, lightly toothed, and of a dark blackish green. *Fruit* roundish, large. The *stalk* is inserted in a cavity formed by two small *mamelonus*. The *calyx* is small, in a large and deep cavity. *Skin* yellow, marked with brown points or dots, and a large patch of russet around the stem and eye. *Flesh* yellow, fine, melting. *Juice* abundant, with considerable acidity. Ripens in October and November. Very productive.

We are inclined to think, from Mr. DESPORTES' description of this variety, that it will be a better *kitchen* than *table* pear.—ED.

◆

FRUITS FROM NEW HAMPSHIRE.—Finding that you take much pleasure in testing and discussing the qualities of the different varieties of fruits, as they become introduced to the public, I send you some of the native varieties found in my immediate vicinity.

No. 1 is a native fall apple, which we call the *Woodward;* Mr. WOODWARD originally owning the land on which the tree stands. It is now owned by D. BOSWORTH. The tree is a good bearer in even years, and bears moderately in the intermediate years. The tree has never been cultivated, and stands in an old pasture which inclines moderately to the west. The soil is a sandy loam, rather moist.

No. 2 is a winter variety, which originated on the land originally owned by J. TICKNOR, and called the *Hebbard Russet;* J. HEBBARD now being the proprietor. The soil is very much like the first, with a westerly inclination. The original tree is probably sixty or more years old; and although it has never been cultivated, and stands so as to take the full northwest blast, it is still thrifty, and bears large crops. I find by cultivation that it is perfectly hardy in this vicinity, and bears well; the fruit almost invariably fair. The young trees in the nursery are inclined to throw out lateral branches; and for this reason they may be set nearer together, and they produce straight, handsome trees.

The pear is what we call the *Tilden*, Mr. ASA TILDEN owning the land on which it grows. It is rather a shy bearer when young; but I think that this will be materially changed when the young grafted trees come into bearing, as nearly all of the trees now of bearing size were raised from suckers from the old tree. The original tree and all the young trees when they come into bearing, produce large crops and bear every year. The trees are good growers and hardy. I can not send you a fair sample of this pear, as it is too late for them. The one I send you is about half the usual size.

The apples are about the medium size as they generally grow in this vicinity. Those I send were picked from the original trees. R. S. HOWE.—*Lebanon, N. H.*

The *Tilden* pear is a handsome medium-sized fruit, obovate in form, inclining to oval. Skin smooth, yellow, tinted with red next the sun, and thickly sprinkled with reddish dots. Flesh juicy, melting, and sweet; pleasant, but not high flavored.

The *Woodard* apple is a very beautiful fruit, resembling the *Summer Rose*. Pale yellow or cream colored ground, with broken stripes and dashes of light red. Flesh soft, tender, and fine grained. The flavor was impaired by carriage when in a ripe state.

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ACKNOWLEDGEMENTS.—We are indebted to Hon. MARSHALL P. WILDER, of Boston, for superb specimens of the following pears: *Beurre d' Anjou*, *Triomph de Jodoigne*, *Urbaniste*, *Beurre Superfin*, *Beurre Langelier*, *Baron de Mello*, *Nouveau Poiteau*, *Van Mons'* 1825, and *Collins*, (a native sort.)

— To Dr. PENNINGTON, of Illinois, for very large and beautiful specimens of the following apples: *Smoke-house*, *Tulphocken*, *Willow Twig*, *White Belle Fleur*, *Winesap*, *Rambo*, *Smith's Cider*, *Yellow Belle Fleur*, *Belmont*, *Rawles Janet*, *Vandervere*, and *Dominie*.

Editor's Table.

Ladies' Department.—Our Index, &c., so occupies our room this month, that we are compelled to omit our Ladies' Department. The following is one of the many inquiries we have received in relation to Flower Seeds:

> "My wife wished to inquire if your offer of flower seeds extends to another spring, as she is anxious to try the effect of introducing the flower culture among the Indian women, with a hope that, like music, it may exert a refining, humanizing influence over their tastes and habits, and thus aid us in our missionary labor." A. S.—*Versailles, N. Y.*

We are not proof against such appeals, and shall supply our female friends who may apply during the winter, with seeds in season for spring planting.

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Impersonality of the Press.—The Boston *Journal of Agriculture* for November, contains a vehement personal attack on the proprietor of this paper for a criticism of a series of articles written by Mr. Levi Bartlett, and published in the *Journal* under the heading, "Theories Examined and Explained." Had the author of said attack thought of the impersonality of the press, and the comity of journalists, he would have learnt the name of the offender, before he presumed to call names and use harsh epithets. Having failed to do this, he has wantonly assailed one who neither wrote nor saw the comments on Mr. Bartlett's articles until they appeared in the *Genesee Farmer*. They were written by Mr. Joseph Harris, who was with Mr. Lawes and Dr. Gilbert when the experiments and researches were made upon which the discussion arose.

It is due to Mr. H. to say, that he has contributed much to the editorial pages of the *Farmer* during the year, in the volume now brought to a close; and to add that his name will hereafter appear as one of the responsible editors of this journal. The proprietor acts upon the principle that it is better to pay liberally for original matter of real value than to publish that of an inferior quality, though paid for inserting it. So long as the farmers, gardeners, and fruit-growers of this continent sustain the *Genesee Farmer* as they now do, it shall faithfully represent their paramount interests, regardless of all mere personal considerations.

◆

Cornstalk Cutters at the State Fair.—Joseph G. Gilbert, 216 Pearl street, New York, complains that in our account of the late State Fair at Utica, we noticed "Taylor, Thomas & Co.," and "Hubbs Patent" Straw and Corn Cutters, but did not mention "Urmy's Patent Corn Stalk Cutter and Grinder," which also was upon the ground.

We did not pretend to any such a task as giving an account of all the valuable implements exhibited, but merely intended to mention such as were recent inventions or improvements on those commonly in use, as came under our observation in the short time allowed us for their examination. We regret that we did not see Urmy's Cutter and Crusher. If, as the published testimonials say, it will cut and crush 75 to 100 bushels of stalks, or one ton of hay and straw, per hour, worked by hand, and that in consequence of the crushing, the cattle will eat up all the stalks without waste, it is a valuable cutter. Price $35.

◆

Youmans' Chart of Chemistry and Class Book of Chemistry.—Mr. Edward L. Youmans has rendered the public a great service in getting up a Chart of Chemistry, for the use of schools and academies, which, with his Class Book, will render the study of the principles of the science at once easy and interesting. The importance of a knowledge of chemistry to the farmer, gardener, mechanic, manufacturer, and professional man, is now universally admitted; and the only debateable point is, the best plan of teaching the science. For the million, Mr. Youman's Chart is *the thing;* and every school in the United States should have one for the benefit of its pupils.

◆

New Agricultural Papers.—Messrs. A. B. Allen & Co., of New York, have commenced the publication of a large, well filled weekly sheet called *The Agricultor;* and Mr. Luther Tucker, of Albany, N. Y., has started a somewhat similar journal, folded to have sixteen pages, under the title of *The Country Gentleman*. The proprietors of these papers are well known to reading farmers, and each offers his hebdomadal at $2.00 per annum.

◆

Our friends ordering the *Farmer* will be particular in giving the name of the Post Office, County and State; also, in writing names plain, as by this much perplexity may be avoided to ourselves and subscribers.

Terms—Fifty Cents a year for single copies; *five copies* for $2, being *forty cents each;* and *eight* copies for $3, being *thirty-seven cents each*, and any greater number at the same rate.

Agriculture in Maine.—A handsome, well arranged volume, entitled, "Transactions of the York County Agricultural Society for the years 1850 and '51"—for which we are indebted to the Secretary, S. L. Goodale, Esq., of Saco—shows that our eastern friends are no less active in promoting agricultural improvement than those who consider themselves favored with a more genial climate. We have perused with pleasure an admirable and awakening address, by the Rev. W. A. Drew, of Augusta, delivered before the Society in 1850; another, by Dr. Holmes, of Winthrop, in 1851; also a valuable paper on agricultural education, besides many interesting reports.

A county with a Society such as that of York appears to be, can not but be in a most prosperous condition.

A Fine Farm for Orcharding.—Geo. J. Whitney, Esq., of Rochester, offers to sell, or rent for a term of years, his beautiful farm on the Rochester and Charlotte Plank Road, in the neighborhood of Mr. Donnellan's and Messrs. Ryan & Co.'s gardens and nurseries. It contains 150 acres of land, all in fine condition, well fenced, &c., with large orchard of the best fruit just coming into bearing. It is well watered and contains every requisite for orcharding. To any person desiring to embark in this business, a more eligible location, or tract of land cannot be found. We thus notice it because we have heard of late several inquiries on the subject.

Many articles, some of them in type, we are compelled to omit; among them several answers to inquiries, which will appear in our next.

Advertisements, to secure insertion in the *Farmer*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in advance.*

Inquiries and Answers.

Watering Sheep, &c.—Many times have I been thinking on some doubtful point connected with agriculture, and on the "tip toe" of writing to you for light on the subject, when the very next number comes with the answer to some other inquirer. But there are several questions in my mind which I have not seen treated upon:

1st. Concerning sheep watering—Some farmers let their sheep go all the season without water. Is this right or wrong? Have any experiments been tried on this point? What is the effect of not watering?

2d. Can as much butter be obtained from sweet milk as from the same quantity of sour? Experiments and facts wanted.

3d. Are cisterns ever used on dry farms? If so, with what success?—the best mode of constructing them, &c. &c.
R. P. Robinson.—*Chittenango, N. Y.*, 1852.

1st. When sheep are fed on green food they will do very well without water; but if their food is dry, a regular supply of water is absolutely necessary for the health of the animal. In winter many farmers we know do not give their sheep any water, and the poor things have to supply themselves by eating snow; but when water is accessable they manifest a decided preference for it and drink regularly. In some experiments on South Down sheep, we found that when fed on clover hay alone, in the summer months, each sheep eat about three pounds of clover hay and drank six pounds of water per day. Thinking they drank more than was good for them, we confined them to a less quantity for a week; they did not eat so much food, and *lost weight* during that week.

2d. There is considerable difference of opinion on this point. Some say the butter is sweeter and altogether better when the milk is churned while sweet, than if soured. It is, however, exceedingly difficult to get the butter from sweet milk; and, in fact, however sweet the milk may be when put into the churn, it always turns sour in churning or the butter will not come. A better quality, though possibly not so large a quantity, of butter can be obtained from the cream alone, than when the whole cream and milk are churned together; there is less cheesey matter (casein) in the butter, and it is better for packing and preservation. There is the same amount of butter in the sour milk as there is in the sweet; the sugar, and not the butter, being converted into lactic acid; and as butter is obtained much easier from sour than from sweet milk, it is probable that the sour milk will yield the most butter.

3d. We know of no satisfactory experiments on the point.

HORTICULTURAL.

(Dan'l F. H.) The wild crab may be used for a stock. We should prefer grafting it near the ground, unless very large, in order to avoid the difficulty of the scion over or out growing the stock.

A Subscriber wishes to know where he can obtain Cranberry *seed*, and the quantity necessary for an acre, and also the manner of sowing, culture, &c., &c.

Willow cuttings can be procured at the nurseries. You will find a market in any large town, only let it be known that you have such an article for sale.

(V. T., Kingsville.) We would advise you to plant your Osage Orange next spring. We prefer yearling plants for a hedge, to those which have stood two years in the seed bed. You have to cut them back to near the surface of the ground, at any rate, and the young plants are less checked, and throw out an abundance of branches with more rapidity than the two year olds.

(J. M. Ward.) Plant Bugs.—The bug so injurious to your potatoes and flowers, is probably the common squash bug; and the means you have adopted to destroy them or prevent their ravages, are the only ones we know, unless that of calling in the aid of poultry.

The Blackberry.—This is cultivated in the same way as the Raspberry. Give them a good, light, rich, loamy soil.

The Horticulturist.—Address James Vick, Jr., one of the editors of the *Farmer*, who has recently purchased it and will publish it after the 1st of January, as you will see by prospectus.

Emery & Co.'s Improved Horse Powers, Threshers, and Seperators

THE undersigned have been appointed sole agents for the sale of Emery's new Patent Improved Horse-Powers, Threshers, and Separators, in the city of New York. The State Agricultural Warehouse is the only depot where this superior Power can be had.

LONGETT & GRIFFING,
7-tf. State Ag. Warehouse, 25 Cliff st., New York.

Superphosphate of Lime.

THE genuine article, manufactured by C. Duburg, in bags of 150 lbs. each. The subscribers have made a contract for a large quantity. We are now prepared to supply any quantity that may be ordered. Farmers and gardeners would do well to call on us before purchasing elsewhere, as we are now able to sell for a less price than heretofore offered. Every bag is branded "C. Duburg, Extra, No. 1."

LONGETT & GRIFFING,
State Agricultural Warehouse, No. 25 Cliff Street, New York. [11-tf]

Pure Java Fowls,

WARRANTED PURE, from Imported stock direct from Java. This breed is not excelled by any raised in the United States for laying or hatching. Weight from 15 to 20 lbs. per pair. Their color is a shiny black.

Also, some very fine Black Polands, which are better known than the Javas.

☞ Price—Javas, $5.00 per pair; Polands, $5.00 per pair. Address J. W. PLATT,
[12-*1] Rhinebeck, N. Y.

ANDRE LEROY,

Nurseryman, at Angers, France,

HONORARY and Corresponding Member of the principal Horticultural Societies of the United States and Europe, begs leave to inform his friends and all the Nurserymen of the Union in general, that he has made large preparations and has now on hand, a considerable stock of the finest Evergreen Seedlings, Roses, Fruits, and Ornamental Trees, &c. &c., most suitable for the American market. The experiments of several years, of putting up large orders for the United States, enables him to flatter himself that he has now all the necessary knowlepge to give full satisfaction, and to insure the delivery, in good order, of all the Trees, &c., ordered.

He also begs to inform all Nurserymen who have not already received the supplement for 1852, to his Catalogue for 1851—that it can be obtained free of any charge at his Agent's office, M. Ed. Bossange, 138 Pearl St., New York, who will also attend to forwarding all orders sent to him, and to pass through the Custom House; and re-ship all goods ordered without any delay and with the greatest care.

Address M. Andre Leroy, Angers, France, care of
ED. BOSSANGE,
[11-2t] 138 Pearl Street, New York.

Potatoes—The White Mercer.

500 BARRELS of the White Mercer (seedling) Potatoes are now offered for sale by the subscriber. This remarkable white potato is of almost unparalleled productiveness—of beautiful shape—its proportion much like the long pink-eye, being a little more flattened.

This potato was obtained by the subscriber from the seed of the common Mercer, nine or ten years since. It received the first premium from the N. Y. State Agricultural Society, and a Diploma was awarded for the same by the Monroe Co. Agricultural Society. Since this period the White Mercer has attained, in Irondequoit, increased popularity with farmers and gardeners—to so great an extent that from 800 to 900 acres were planted in that town the past season, the product of which has been astonishingly abundant—yielding from 150 to 400 bu. per acre, as I have been creditably informed. The yield of my own crop, planted mostly among fruit trees, gave 200 bu. of fine potatoes per acre. Those who have hitherto had but a scanty supply of the article, on account of the rot, or from any other cause, may, by obtaining a barrel or two of White Mercers grow them in great abundance.

The White Mercer is very white outside and in, mealy, of good flavor, and longer keeping than any other potato with which I am acquainted. It is a late grower, requiring early planting, and is less subject to rot than any other potato known in these parts.

Price $2 per barrel, shipped to any part of the United States. Orders will be received through the Rochester P. O. till the stock of potatoes are exhausted, after which notice will be given, and all moneys returned promptly if the potatoes are not forwarded.

H. N. LANGWORTHY.
Irondequoit, near Rochester, N, Y. [12-tf]

Important to Farmers.

PORTABLE MILL.

Oakland, near Geneva, N. Y., Aug., 28, 1852.

Mr. Charles Ross—Dear Sir:—In reply to your letter of the 25th inst., it is a pleasure to speak in commendation of your Patent Conical Mill. To me, it has proved valuable for grinding food for my stock, as a few hours labor with this Machine prepares food enough for fifteen head of cows several days. The Mill used by me prepares food for horses, sheep, and swine, grinding and mixing corn, oats and other grains, satisfactorily. It has also produced for my use, our Indian meal, buckwheat meal, and occasionally wheat flour, thus saving the time of teams and men, which otherwise must have been occupied, going several miles to a distant mill, at much expense; it is therefore a source of economy as well as an inducement to better care of all stock. It affords also one among other resources of convenient and useful labor during stormy weather. My belief is that your Mill will work its way into general use upon farms where stock is raised, and where grist mills are not within a short distance. In my estimation this mill is among the most important machines offered to the farmer.

Respectfully yours, J. Delafield.

N. B.—Mr. Delafield has had the Conical Mill in use on his farm for nearly four years.

Any further information respecting this Mill, may be obtained by letter (post-paid) addressed to

CHARLES ROSS, Manufacturer,
2d story Phœnix Building, Acqueduct st., opposite the Arcade, Rochester, N. Y.; or to Joseph Sedgebeer, General Agent for the West.
December. 1852.

BOOK AGENTS WANTED.

GOOD salesmen can earn from $1 to $3 per day, in selling

AGRICULTURAL BOOKS,
POLITICAL CAMPAIGN BOOKS,
LARGE AND SMALL BIBLES,
POLITICAL AND OTHER PICTURES,

Uncle Tom's Log Cabin; Uncle Tom as it is; Northwood, Mrs. Hale's new book; Cheap Publications; Gold Medals, Gen. Scott and Gen. Pierce; together with other new books.

I will furnish agents with from $15 to $20 worth of books for cash, and take back all the unsold books and refund the money. Agents can make from 25 to 100 per cent. profit, and in this way are not compelled to keep their stock if not sold. Books can be sent by Express to any address. Money can be safely sent by mail. Address

D. M. DEWEY,
Oct., 1852. Arcade Hall, Rochester, N. Y.

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THE present number completes the volume for 1852. To those who have read the *Farmer* this year, we need not say that we have spared neither labor nor expense to make our paper interesting and valuable. But for our large and almost unparalleled circulation, every volume we print would cost us more than the price charged to subscribers. To our friends and agents everywhere, we tender our acknowledgements for past favors, and hope to increase our indebtedness another year. Let every subscriber spend an hour in calling the attention of his friends and neighbors to the claims of the *Genesee Farmer*, and we shall more than double our circulation the coming year. Let all engage in this work, and form clubs early. Our agents are already sending in their orders, and from every quarter thus far heard from, large additions are made to former clubs.

The Practical and Scientific Farmer's own Paper.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, &c.

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VOLUME XIV, FOR 1853.

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DANIEL LEE, JAMES VICK, JR., & JOSEPH HARRIS, EDITORS.

P. BARRY, Conductor of Horticultural Department.

IN issuing a Prospectus for the FOURTEENTH Volume of the Genesee Farmer, the Publisher flatters himself that it is too widely known, too extensively circulated, and too well read, to render it necessary to state the design of the work. Those who read the Farmer are the best judges of its value, and those unacquainted with it are invited to examine its pages.

The Fourteenth Volume will commence on the 1st of January, and will be issued regularly on the 1st of each month during the year. It will be printed on new type and superior paper, each number containing THIRTY-TWO PAGES, and making at the end of the year a Volume of 384 pages, with title page, index, &c., suitable for binding. The work is appropriately illustrated with beautiful and really valuable engravings of Farm Buildings, Implements, Domestic Animals, Choice Fruits, Flowers, Shrubs, &c.— The Volume for 1852, when bound, will make the most valuable Volume on Agriculture yet published in this country. The Volume for 1853 we design still farther to improve, and hope to be sustained in our efforts by the farmers of the country.

We number among our Contributors, hundreds of the best through our pages, the benefit of their wisdom and experience. No thinking man can read any number we issue, without receiving some useful hint in regard to the management of crops, stock, or the orchard, of more value than the price of the volume. The *Genesee Farmer* is by far the Cheapest Agricultural Journal published in America.— Our FORTY THOUSAND SUBSCRIBERS place us ahead of all other Agricultural Journals, and enable us to furnish a paper for the trifling sum of *Three or Four Shillings*, equal to any, both in value and beauty. Its position as the *Cheapest*, and at least one of the *Best Agricultural Journals* in the country, is fully established, and we confidently ask for it that support which it merits from the Farmers, Gardeners, and Fruit Culturists of the United States. We invite all who feel the importance of sustaining this work, and extending its usefulness, not only to subscribe themselves, but to introduce it to the patronage of their friends.

Fifty Cents a Year, in Advance.

Five Copies for $2—Eight Copies for $3, and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ POST-MASTERS, FARMERS, and all friends of improvement, are respectfully solicited to obtain and forward subscriptions.

Subscription money, if properly enclosed, may be sent (post-paid or free) at the risk of the Publisher. Address to

DANIEL LEE,
Rochester, N. Y.

November, 1852.

POSTAGE LAW.—By the new Postage Law, which took effect on the 1st of September last, the postage on the *Genesee Farmer* for one year is as follows,—when paid quarterly in advance:

Anywhere in the State of New York,..3 cts.
Anywhere in the United States,......6 cts.

Sausage Cutters and Stuffers.

A VERY superior article, made of wood and iron, that will cut from 70 to 100 lbs. per hour. Price $4, $5 and $8 each. For sale by LONGETT & GRIFFING,
[11-3t] No. 25 Cliff St., New York.

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no farther preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

Cheapest Newspaper in the World!

THE ROCHESTER WEEKLY AMERICAN,

(A MAMMOTH FAMILY AND GENERAL NEWSPAPER,)

WILL be afforded, from and after January 1st, 1853, at the unparalleled low price of *ONE DOLLAR PER ANNUM*, payable *invariably in advance.*

The AMERICAN is the largest and best weekly journal in the State of New York. It contains thirty-six columns, filled with choice original and selected articles, and embracing all those topics which are looked for in the most popular, comprehensive and valuable journals of the day.

Particular attention is paid to the markets of all agricultural products.

Persons desiring to subscribe will please enclose One Dollar, post-paid, to LEE, MANN & Co., Rochester, N. Y., proprietors of the *American.*

The postage on the *Weekly American* (paid quarterly or yearly in advance) is 26 cents a year to any part of the United States. LEE, MANN & CO.

Rochester, N. Y., December, 1852.

THE COUNTRY GENTLEMAN.

A Journal for the Farm, the Garden, and the Fireside.

THE publisher of *The Cultivator*, having, since the death of Mr. Downing, disposed of *The Horticulturist*, has determined to carry into effect a project he has had for some years in contemplation, of establishing a Weekly Journal, in connection with *The Cultivator*, to be devoted to the cause of Agriculture, and the Rural Arts generally. In pursuance of this plan, he has issued a specimen number. The regular publication of *The Country Gentleman* will be commenced on the first Thursday of January, 1853, and its scope will embrace:

I. *The Farm.*—Including—1. The Principles of Cultivation, the Preparation of the Soil, and the most approved methods of Culture, of all the crops grown in this country. 2. The Manufacture, Preservation, and Application of Manures. 3. The Description and Illustrative Drawings of all Implements and Machines requisite for the Farmer's use. 4. The Breeding, Rearing, and Management, of all the Domestic Animals, with Engravings of the different breeds.

II. *The Garden and the Orchard.*—1. Descriptions will be given of all the Fruits, of the different varieties, suited to the various sections of the country, together with the best modes of Propagation and Cultivation. 2. Select Lists and Descriptions of Flowers, Shrubs, and Trees, suitable for large and small places, with Directions for their Culture. 3. Special attention will be given to the products of the Kitchen Garden, a department hitherto too much neglected, as there are many plants highly desirable for the table, which have not come into general culture.

III. *The Fireside.*—This department will be of a miscellaneous character, embracing every variety of instructive and entertaining subjects, such as Historical, Geographical and Biographical Notes, Literature, Natural Science, Tales, Poetry, &c., consisting of original articles and selections of a high order.

IV. *Record of the Times.*—Under this head will be given a concise and systematic abstract of the News of the Week, embracing briefly everything of general interest to country residents.

V. *Produce Markets.*—Great efforts will be made to render this department full and complete, and particularly valuable to the Farmer and Produce Dealers. A careful synopsis of the prices of Produce, Wool, Live Stock, &c., at the leading markets, will be given, as well as the condition of crops in the different sections of the country, &c.

It will be the aim of the publisher to make the paper attractive and elegant in its typography and illustrations, choice and select in its contents,—to make it indispensable to the Farmer, and desirable to every one who has a rod of ground to cultivate, or a home to beautify,—and by devoting its columns to Improvement in Agriculture, Elevation in Character, and Refinement in Taste, to render *The Country Gentleman* the standard in its sphere.

TERMS.—*The Country Gentleman* will be printed in quarto form, each number consisting of sixteen pages, and forming an annual volume suitable for binding, of 832 pages, at TWO DOLLARS per year when paid in advance, or $2.50 if not paid in advance.

☞ Specimen numbers sent to all post-paid applicants.

Albany, Dec., 1852. LUTHER TUCKER.

Important to Farmers.

IT IS generally conceded by all intelligent farmers that cutting the food for cattle will save from 25 to 30 per cent. Bertholf's Oblique Rotary Corn Stalk, Hay and Straw Cutter, is conceded by all that have used it to be far superior to any other, as it destroys all hard substances in the stalk leaving it soft and easily eaten. It turns very easy and is not liable to get out of order, and, with care, will last an age. It has been awarded Four First Premiums and a Silver Medal, by the American Institute. For further particulars address (post paid) the patentee, H. W. BERTHOLF, Sugar Loaf, Orange Co., N. Y., or LONGETT & GRIFFING, 25 Cliff St., New York, who are agents.

☞ Patent Rights for sale. [11-3t]

Premium Dahlias.

THE subscribers offer for sale this Autumn and the ensuing Spring, 10,000 Dahlia Roots, which have proved to be the choicest collection in the States and Canadas. [See records of the Fairs for the last four years.]

Persons commencing the Nursery business, and Amateurs, will find it to their advantage to give us a call, or make enquiries before purchasing elsewhere.

C. J. RYAN & CO.,

Rochester and Charlotte Plank Road Nurseries, Rochester, N. Y. [11-tf]

Emery's Patent First Premium, 1852,
RAILROAD HORSE POWER,
THRESHING MACHINES, SEPARATORS, &c.,
Western New York Agency.
E. D. Hallock, Agricultural Warehouse,
No. 50. STATE ST., ROCHESTER, N. Y

THE Subscriber, late from the Albany Agricultural Works, Warehouse, and Seed Store, where he has been engaged for the past six years, has secured the sole Agency for the sale of Emery's Patent Railroad Horse Power for Rochester and vicinity, so widely and favorably known throughout the country, and which has, without exception, taken every highest premium awarded in the States of Ohio, Michigan, and in New York, for the best Railroad Horse Powers, in 1850, 1851, and again in 1852, also at the Provincial Fair of Canada, recently held at Toronto, was awarded a Diploma and £2, of which the judges highly commend the principle and workmanship of this Power, now offer them at manufacturer's prices, with the transportation added, and subject to the warrantee as follows:

"To work to the satisfaction of the purchasers as represented in Circulars and Catalogues, or to be returned within three months and full purchase money to be refunded."

For further particulars see Circulars and Catalogues, which are furnished gratis on application to the subscriber.

The attention of the Farming public is solicited, and a careful investigation into the construction of this Power, and its comparative merits, as well as price, is requested before purchasing elsewhere.

The Wheeler Power is also offered *ten* dollars cheaper than heretofore by any other agency, and subject to same warrantee as given by others for the same kinds. Samples will be kept constantly on hand, and to insure promptness and avoid disappointments in supplying them, farmers are requested to send in their orders at as early a date as possible.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in this vicinity, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public. [11-tf] E. D. HALLOCK.

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STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.

PREMIUMS FOR 1853.

During the year 1852 the editors of the Genesee Farmer circulated over Eight Hundred Dollar worth of the best Agricultural Books published in the country. These works, in addition to *Fort Thousand Copies Monthly of our own Journal*, scattered all over the land, even to Oregon and California, we believe have exerted, and will continue to exert a very beneficial influence. Their influenc is not confined to those who receive them, but is felt by their children, their friends and neighbor They must increase the knowledge, and consequently the power, and the wealth of those for whos especial benefit we labor. It is our intention to increase the circulation of these works. We do thi for the good they accomplish, as well as a slight compensation to our friends—the friends of Rura Improvement—particularly Post-Masters throughout the country, who act as voluntary Agents, without the expectation of pecuniary reward. Below we give our List of Premiums for 1853.

PREMIUMS TO INDIVIDUALS.

1st. THIRTY DOLLARS in Agricultural Books, to the person who shall send us the larges number of subscribers, at the club prices, before the 10th day of April next, so that we may announce the successful competitor in the May number.

2d. TWENTY DOLLARS in *Agricultural Books*, to the person who shall send us the secon highest list, as above.

3d. TEN DOLLARS, in *Agricultural Books*, to the person who sends us the third highest list.

In order to make the circulation of *Good Agricultural Books* More General and Beneficial and to reward every one of the friends of the Genesee Farmer for their exertions in its behalf, w will give to those not entitled to either of the above premiums, the following *Books*, free of postage or *Extra Papers*, as may be preferred:

1st. To every person person who sends SIXTEEN Subscribers, at our club terms of three shilling each, one extra copy of the Farmer.

2d. To every person sending for TWENTY-FOUR Copies, as above, any Agricultural Book value at 50 cents, or two extra copies of the Farmer.

3d. To every person ordering THIRTY-TWO Copies of the Farmer, any Agricultural Book wort 75 cents, or three extra copies of the Farmer.

4th. For FORTY, any Agricultural Book valued at $1, or four extra copies of the Farmer.

5th. For FORTY-EIGHT, any Agricultural Book worth $1,25, or five extra copies of the Farmer

☞ For larger numbers, Books or papers given in the *same proportion*. To *save cost* to our friends, we *pre-pa postage* on all Books sent as premiums, and persons entitled will please state whether they wish Books or extra paper and make their selection when they send orders, if they desire Books; or if they have not obtained as many subscriber as they intend to, we will delay sending until the club is full, if so requested. We do not require that all the papers c a club should be sent to one Post Office. If necessary for the convenience of subscribers, we are willing to send to a many different Offices as there are members of the Club. We write the names on each paper, when a number is sen to the same Office, if so desired, but when convenient Post-Masters would confer a favor by having the whole numbe ordered at their own office, sent to their own address. ☜

COUNTY PREMIUMS.

To aid as much as possible in establishing *County Agricultural Libraries*, we offer the followin Premiums, which we hope will aid in the more general establishment of County Libraries:

1st. We will give an AGRICULTURAL LIBRARY worth FORTY DOLLARS to the County i which the *greatest number of copies of the Genesee Farmer is taken by the 10th of April next.* Thi Library to be kept as a County Agricultural Library, under the care of the Agricultural Society.

2d. To the County in which the next greatest number is taken, an *Agricultural Library wort* TWENTY-FIVE DOLLARS, on the same conditions as above.

As the above two premiums will probably be taken in the *State of New York*, and as we wish t give our friends in other States an equal chance in the competition, we offer the same premiums t COUNTIES OUT OF THE STATE OF NEW YORK, thus:

1st. To the *County out of the State of New York* in which the greatest number of copies of ou paper is taken, an Agricultural Library worth FORTY DOLLARS.

2d. To the next *County out of N. York*, a Library worth TWENTY-FIVE DOLLARS.

☞ As all Subscriptions commence anew with the year, places where the Farmer was never before taken will stan an equal chance in the competition for premiums. Individuals will receive the premiums to which they may be entitle for their individual benefit, as a compensation for their personal exertions, and the numbers they send will be credited t the Counties where the papers are sent, so that the premiums to individuals will not at all interfere with the County premiums, or the County with individuals.

BACK VOLUMES of the Farmer will be furnished, if desired, and counted the same as new subscribers. We sha keep a correct account of the subscribers sent by each person and county. In the May number we shall announce th premiums. *Libraries* will be forwarded per order, immediately after the announcement, and persons or societies ca select their own books, or leave the selection to us. ☞ Specimen numbers, show-bills, &c., sent to all post-paid applicants. All letters must be paid or free. Subscription money, if properly enclosed, may be mailed at our risk.

THE HORTICULTURIST FOR 1853.

THE melancholy death of A. J. DOWNING deprived the readers of the *Horticulturist* of the labors of one whose essays they had so long read with unmingled pleasure and profit. Since that sad event became known, the great question among the horticulturists of the country, who have evinced a deep interest in the matter, has been, who should succeed to this important post. With singular unanimity, it has been assigned to P. BARRY, of Rochester, who has been urgently solicited in various ways, both publicly and privately, to take charge of the work. This, from the nature of his engagements, he could not do while the *Horticulturist* was published at Albany. The subscriber, who has long been connected with Mr. BARRY, as one of the editors of the *Genesee Farmer*, has therefore purchased the *Horticulturist*, and after the conclusion of the present volume it will be PUBLISHED AT ROCHESTER, and EDITED BY P. BARRY, assisted by many of the best Horticulturists of the country, whose communications will materially add to its value. The ARCHITECTURAL DEPARTMENT will be conducted by gentlemen of ability and reputation.

To render the work accessible to a greater number, and consequently more beneficial, the price will be reduced to Two DOLLARS per year, *in advance*, and at the same time various improvements made. Each number will contain a full page engraving of some new, rare and valuable fruit or flower, drawn from nature, and engraved in a style not excelled.

Still further to add to the value of the work and meet the improving taste and increasing wants of the Horticultural community, we shall also publish an edition with COLORED PLATES, each number containing a full page engraving of some new, rare and valuable fruit or flower, correctly colored from nature, by the best living artists in this line. This will be a new and important feature, in this country, and must command the attention and patronage of both professional and amateur Horticulturists. As the number of colored plates we can furnish will be limited, from the care and time required in their preparation, those who wish the *Colored Edition of the Horticulturist for* 1853 will do well to order immediately. Price with colored plates, FOUR DOLLARS, *in advance.*

All who cultivate fruit or flowers should read the *Horticulturist*, as it is devoted entirely to Horticulture and its kindred arts Landscape Gardening and Rural Architecture, and will keep its readers advised of everything new on the subject, either in Europe or America.

It will be our aim not only to make the Horticulturist superior both in style and matter to any work of the character in this country, but equal to any of the Horticultural Journals of Europe, and we confidently ask the aid and co-operation of the Horticulturists of the country. The January number will be issued early in December, and specimen numbers will be sent to all who will interest themselves in its behalf. The volume to commence on the 1st of January, 1853.

Address J. VICK, JR., PUBLISHER,

November 1, 1852. *Rochester, N. Y.*